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ABSTRACT

This project developed a series of different interventions designed to reduce sexual stereotyping and bias with regards to career choice at Montana State University in faculty and students. Inservice education programs were designed to assist faculty and students in becoming more aware of themselves, their biases, and career opportunities. Approximately 90 faculty and administrators participated in workshops designed to assist in self-exploration and awareness as well as recognition of their own sexual bias and stereotypes. In addition, a program entitled "Math and Sex" was created to remove critical roadblocks for men and women. (Author/LRA)

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Final Report

Project No. 554AH80382
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REDUCTION OF SEXUAL STEREOTYPING AND BIAS WITH REGARDS TO CAREER CHOICE: A LAND GRANT INSTITUTION OF HIGHER EDUCATION

September 30, 1979

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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Reduction of Sexual Stereotyping with Regards to Career Choice
a Land Grant Institution of Higher Education

Purpose

To develop a model program and materials in the reduction of sexual stereotyping for use in post-secondary institutions.

Abstract

The purpose of this study is to reduce sexual stereotyping and bias with regards to career choice at MSU in 108 selected faculty and approximately 120 General Studies students. We propose to develop a series of different interventions designed to reduce sexual stereotypes and bias with regards to career choice. In-service educational programs will be designed to assist faculty and students in becoming more aware of themselves, their biases, and career opportunities. Approximately 90 faculty and administrators will participate in workshops designed to aid them in becoming more aware of their sexual biases and stereotypes. Selected faculty will also assist in facilitating small group career-life groups, thus improving their own advising skills.

120 General Studies students will participate in Career-Life Planning Workshops. These workshops are structured in nature and are designed to assist students in self-exploration and awareness as well as recognition of their own sexual bias and stereotypes. The Assistant Director of the Project will work closely with the target population in career and academic advising to assist in students' self-exploration and understanding, aid them in planning their educational programs, encourage students to explore non-traditional careers, and provide them with opportunities to interact with individuals in real work-a-day world. (Career Resource Personnel Office). Live specimens from the work world will join the staff in career presentations whenever possible.

Last is the creation of an innovative program entitled "Math and Sex," which will be created to remove critical roadblocks to men and women, particularly women. All targeted General Studies students will participate in a comprehensive career assessment, including an evaluation of mathematical competency; math failure is seen as a critical block in perpetuating sexual stereotyping in career choice. Individualized special math classes will be designed and taught by a female mathematician, Dr. Deborah Gale, to enable targeted General Studies students to understand and pass math courses which are so vital to 57 curriculums at Montana State University.

Final Report

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Office of Student Affairs and Services
Montana State University
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U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education

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Chapter 1

NEED AND IMPACT

Sex Role Stereotyping and Bias: A Review of Pertinent Literature

> NO PERSON IN THE UNITED STATES SHALL, ON THE BASIS OF SEX, BE EXCLUDED . . . from participation in, be denied the benefits of, or be subjected to discrimination under, any education program or activity receiving federal financial assistance.
>
> Title IX
> Federal Educational Amendment of 1972

Although these 37 words have made it illegal for most colleges and universities to discriminate against either sex in a vast number of areas, Andrew (1972) finds that every major institution, including education, the legal system and industry as well as more subtle institutions such as religion, the family, popular literature and mass media, all support the male-dominant order which descriminates against women.

"Like polluted air, stereotypes surround us. Like polluted air, they are invisible; we tend to be unconscious of them, and there is a critical point at which they become dangerous" (Tauris, C., 1977).

To that many women would say "Amen." There is no doubt that sexual biasing and stereotyping are rampant; in fact, Labor Secretary James D. Hedgson stated that "Discrimination against women is more subtle and more pervasive than against any other minority group."

In recent years, much literature has been published that is concerned with sex-role stereotyping of women and men. Often, this stereotyping has been attributed to socialization, a term defined as the process by which women and men learn the attitudes and goals of their own groups. Children are educated or socialized from birth to many things--one of which is the wide-reaching assigned role of gender (Bem and Bem, 1970).

It is in the early socialization period that bias, role expecations and sex role stereotyping are first formed. Girls and boys internalize their sex roles differently according to cultural definitions of what is considered male and female behavior. Girls learn their central role obligation is procreation and that their role obligations are preferably confined to family and community. Within these boundaries, the sex role images acqired by females are of a nurturant helping and empathizing nature.

On the other hand, Ruth Hartley states that boys learn what they are not supposed to do as opposed to what they are supposed to do. Young boys hear, "Don't be a scardy cat." "Don't let _____ bully you." They are told to "act like a man," "be strong," "Make decisions, protect your women, make money," and so on. Thus, the sexual-role images acquired of young males is that of toughness, independence, authority and power. However, when these 8-11 year old boys describe female adults, they say, "They are always at those crazy household duties. Their work is regular drudgary. Women haven't enough strength in the head or body to do most jobs." These images affect men and women's notions about probable future occupational involvement and they select occupational roles according to these sexual-related qualities. Parents, teachers, peers and communication media all reinforce the occupational images and stereotypes throughout the socialization process (Hartley, R., 1976).

A description of stereotyped traits of the sexes as formed through socialization are provided by Bardwick and Douvan (1971):

> What are big boys made of? What are big boys made of? Independence, aggression, competitiveness, leadership, task orientation, outward orientation, assertiveness, innovation, self-discipline, stoicism, activity, objectivity, analytic mindedness, courage, unsentimentality, relationality, confidence and emotional control. What are big girls made of? What are big girls made of? Dependence, passivity, fragility, orientation, interpersonal orientation, empathy, sensitivity, nurturance, subjectivity, intuitiveness, yieldingness, receptivity, inablility to risk, emotional liability and supportiveness (p. 147).

Through socialization an individual, whether male or female, learns that certain behaviors and modes of being are acceptable and others are not. Boys are encouraged to be aggressive, competitive and independent, whereas girls are rewarded for being passive and dependent (Barry, Bacon and Child, 1957; Sear, Macoby and Levin, 1957). As others have documented, this continues to prevail throughout childhood and results in a prevalent attitude by which the sexes are dichotomized into two distinct molds. Freiden (1963), in writing about this in regard to women, developed the well-known phrase, "the feminine mystique."

While the most intense and overt socialization occurs in infancy and childhood, social learning continues throughout life. Rossi (1967) says, for example,

> It is during the early years of elementary school education that young people develop their basic views of appropriate characteristics, activities and goals for their sex.

It is in the school that, instead of broadening the base on which children form their images of male and female roles, the school perpetuates the image children bring from home. It has been mother who guided their preschool training; now in school it is almost exclusively female teachers who guide their first serious learning experiences. And, for the girl, women are again the ones in charge of children. Probably her teachers expect her to be quiet, dependent, with feminine interests in doll and house play and dressing up. In a few years she enters classes for child care, cooking and practical nursing.

With regards to subtle, yet critical influences from storybooks and texts, the following dismaying findings are discouraging.

In reviewing children's book award winners and finalists, it was noted "that for every 11 pictures of men, there was one picture of a woman--that from 1938-1973, for every three books about women there were eight about men and that not one woman was presented as having a job" (Paffer, 1974).

Furthermore, in analyzing America's major social studies textbooks for 5-8 year olds, the only jobs women had outside the home were those of nurse and teacher . . . in all cases they were unmarried (DeCrow, 1972).

Susan Metz (1977) studied the effect of books with sex role stereotypes as compared to others without bias with regards to interests and comprehension of 5th grade boys and girls. Although no significant differences were found with regards to comprehension, the girls were significantly less interested in reading that contained sex role stereotypes and significantly more interested in texts that showed women in non-traditional roles.

A recent study done by the California State University System in 1977 indicates that although elementary and secondary textbook publishers have been provided guidelines to identify areas of bias, only minimum changes have occurred. There has been an increase of female roles from 14% to 16%, an increase in ethnic minorities males from 9% to 12%, and ethnic females from 2% to 4%. A sad story!!

Joffe (1971) studied a progressive nursery school that consciously tried to avoid teaching sex stereotyped behavior to boys and girls. Even here, though, subtle influences from some of the teachers motivated sexual-typed behavior. For example, the songs, storybooks and games were stereotyped. Further, girls were complimented on how nice they looked; boys were more rewarded for aggression than were the girls.

As girls and boys move up the age ladder, out of elementary school and into courses for older children, the same distortions occur at a more complex level. Often, young people are instilled with the largely unexamined assumption that the only alternatives possible for the future are those which were possible in the past (Bart, 1972).

Education, too, poses a current incongruent message for young girls. That is, girls are encouraged equally with boys to achieve good grades and, up to a point, both boys and girls take the same

subjects. Thus, while a girl hears the message to do well in school, she, in reality, has had limited pathways outside of school in which achievement of high grades mattered. In the so-called land of opportunity, females have to deal with conflicting messages relative to her status of being female.

Ruth Hartley's (1976) provocative article on sex-role pressures discusses how boys 8-11 think in terms of what "they have to be able to do" as opposed to what is expected of them.

> They have to be able to fight in case a bully comes along; they have to be athletic; they have to be able to run fast; they must be able to play rough games; they need to know how to play many games--curb ball, baseball, basketball, football; they need to be smart; they need to be able to take care of themselves; they should know what girls don't know--how to climb, how to make a fire, how to carry things; they should have more ability than girls; they need to know how to stay out of trouble; they need to know arithmetic and spelling more than girls do.
>
> We learn a little more when we ask, "What is expected of boys?" We find that they believe grown-ups expect them to be noisy; to get dirty; to mess up the house; to be naughty; to be "outside" more than girls are; not to be crybabies; not to be "softies"; not to be "behind" like girls are; and to get into trouble more than girls do. Moreover, boys are not allowed to do the kind of things that girls usually do, but girls may do the kind of things that boys do.

In summary she states that,

> Boys learn what they must not be before they gain much knowledge of what it is that they are supposed to be. The consequences of this process can be painful and long lasting, often leading to a life-long aversion to any quality thought to be feminine and a constant striving for the ways in which to be masculine (p. 235).

By and large, education as it has existed implies that very little is likely to occur in the future with respect to the place of women in society. Fortunately, efforts are now being made to change the tone of education and girls are beginning to hear more than the message that they should only look forward to a life of submissive housework and child-rearing.

A dysfunctional aspect of this sex-role differentiation is that of the actual harm done to women. Implicit in the dichotomization

of behavior patterns deemed "acceptable" for boys and girls is the standard of males being superior (more valued) and females inferior (less valued). Brown (1957) found that almost no boys between the ages of 3 and 10 want to be girls, but a substantial number of girls do wish they were boys--a reflection of the girl's incipient awareness of the relative devaluation of the female role. Horney (1926) supports this by stating:

> In actual fact a girl is exposed from birth onwards to the suggestion--inevitable, whether conveyed brutally or delicately--of her inferiority, an experience which must constantly stimulate her masculinity complex.

While males are taught to esteem themselves through achievement and outgoing activities, females learn to esteem themselves insofar as they are esteemed by those with whom they have emotional relationships (Bardwick and Douvan, 1971). Achievement for most women is adult status through marriage, not success in the usual sense of the word. Society's expectations about the female role(s) dictate to the female student that she is popular, desirable, marriageable, and able and willing to bear children. Males, on the other hand, spend an indeterminable amount of time proving one is not at all feminine and have incorporated the Protestant ethic of "hard work, success and status." Whereas a women's status is measured in terms of "whom they marry," a man's status is measured by how much money he is worth. This conditioning is taking place at a time when egalitarian principles are being recognized in institutions of higher learning and when the whole structure of public education rests on acceptance of equality of opportunity, without regard to color, race, religion or sex. The result is confusion, ambivalence and emotional havoc among girls with talents or intellectual abilities. The result is also a damaged self-image and a decline in self-respect among the vast majority who cannot transcend the narrow stereotypes of behavior prescribed for them.

Women inevitably come to internalize the general disesteem in which they are held, as demonstrated by Goldberg (1968) in his

study, "Are Women Prejudiced Against Other Women?" By testing the reaction of women undergraduates to an essay signed alternately by "John McKay" and "Joan McKay," he found that women downgraded the work of professionals of their own sex--not only in traditionally masculine fields, but in traditionally feminine fields as well.

Bardwick and Douvan (1971) also address this point of women's self-concepts:

> Women tend not to participate in roles or seek goals that threaten their affiliative relationships because in those relationships they find most of their feelings of esteem and identity. This perpetuates psychological dependency which may be functional in the relationships, but injurious to the self-concept of those who have internalized the values of the culture.

Freeman (1971) adds:

> Society has controlled not her (women's) alternatives, but her motivation to choose any but one of those alternatives.

Horner (1971) cogently says:

> A peculiar paradox arises in the society because we have an educational system that ostensibly encourages and prepares men and women identically for careers that social and, even more importantly, internal psychological pressures really limited to men.

and

> Thus, while society has been "legally" opening its doors to women and decrying the loss of female potential, it has been teaching them to fail outside the home.

Culturally-imposed sex-role differentiation is, then, costly to many, if not all, females.

Another study conducted by Deaux and Emswiller indicates downgrading of females in our society also relates to attitudes concerning success. In evaluating performances on sex-linked tasks, both men and women attributed a male's success to skill and intelligence but considered a similar successful performance by a female as "lucky". The results of this study suggest that because of different socialization, women develop less confidence

in their skills, less independence, and lower self esteem, than do men. Because a woman lacks confidence and self esteem, she is more vulnerable to a fear of failure. Consequently, when options are open to her, she is less likely to take advantage of the opportunity.

Besides a fear of failure, women also experience a fear of success (Matting Horner, 1971). Horner's study indicates that normal achievement strivings of women can be inhibited by the expectation that success will be followed by negative consequences because achievement is not appropriate for females.

Stein and Bailey (1973) similarly report that expectations are crucial in outcome. Women are forced to have a different pattern of achievement motivation than males. Women reduce achievement efforts when they perceive that their success might jeopardize their social success.

Self-concept is examined in a study by Maury Lacher (1975) on Sex Differences in Self Evaluation of Academic Achievement and Ability. Women students were found to underestimate future performance on intelligence and academic tasks while men overestimated their performance. Women tended to state that grades were over-representing their ability and men felt that their grades under-represented their ability.

Thus, the result from socialization is often a damaged self-image and a decline in self-respect among the vast majority who are unable to transcend the narrow stereotypes of behavior prescribed for them.

No small wonder that although women do better in high school, fewer aim to go on to graduate from college, and fewer yet earn graduate degrees. In a study by Ralph Turner (1970) he found that when young women (near graduation from high school) were asked, "If you plan on a lifetime career, what occupation do you think you will make your life work?" a substantial number were <u>not</u> able to name a particular vocational choice and the remainder largely chose traditional vocations. Turner concludes that women lack

realistic knowledge about the vocational choice they are making.

Patterson (1973) stated six significant reasons why young women have not been influenced by vocational counseling. In summary, he states that women become enculturated to the "female role" in society--that counselors, male and female, are misinformed about women and the world of work and still function with the same stereotypes that others do. Furthermore, vocational and guidance counselors do not deal with issues of sexual and vocational identity which created much conflict within young women today. Correlating with this is that counselors do not assist women in being prepared for the discrimination which exists in today's work world.

This is substantiated by other studies; a large proportion of young women in high school and college, because of our socialization process, state that marriage and children are their major areas in life. They do not see the need for career planning and exploration around career choice because their husband "is going to take care of them". The idea that home and family might not satisfy all of woman's needs was incomprehensible. For these women they are simply not aware of the fact that over half of them will need to work, and, in fact, may want to work. They are simply not in contact with the reality of today's economic situation.

However, a recent market opinion poll (1975) suggests that some of this may be changing. Of 1,522 women polled between the ages of 12-34, three-fourths of them preferred a lifestyle where they could combine career and homemaking; only 9% stated they wished to be a homemaker all the time. Forty-eight percent (48%) of the 1,522 stated they needed additional training while over one-half (1/2) were interested in college/university training.

It is not surprising that female students entering post-secondary education have vague career plans, if any, and have unrealistic attitudes about the world of work. Ginzberg's (1951) pioneer work indicated that women indeed do not choose college majors with any kind of vocational implication. For some reason,

the world of work is not a reality for these women; fantasies and lack of perceived opportunities play an important role in the occupational choice process. Unfortunately, higher education offers few solutions for the problem (House, 1975).

Not only are there few solutions in higher education, there are, unfortunately, a number of barriers that women students must overcome. In the study conducted by Westervelt (1975) various institutional barriers in higher education are discussed. Some of the areas included were: admission practices such as sex quotas and age restrictions, financial aid practices, institutional regulations, housing policies, curriculum planning, and faculty/staff attitudes and behaviors.

Recent legislation has been enacted to deal with some of these problems. Title IX of the Educational Amendment, 1972, mandates sex discrimination be eliminated in federally-assisted education programs. Title IX has significant implications for a variety of issues including recruiting, admissions, financial aid, student rules and regulations, housing rules, health care and insurance benefits, student employment, textbooks and curriculum, single sex courses and women's studies programs (Dunkle and Sandler, 1975).

Dunkle and Sandler (1975) report in reference to the Title IX application for counseling students that:

> While there is little question that it is important for an institution to provide its students with unbiased counseling, there is considerable disagreement concerning how this might most appropriately be accomplished. Sex bias in counseling is perhaps even more difficult to identify and rectify than bias in textbooks or curricula. Because of the subtle nature of discrimination in this area, the government is even less likely to intervene in counseling programs than in the area of textbooks and curriculum.
>
> Although counseling programs alone cannot take the blame or credit for career and personal choices students make, they typically mirror the attitudes of the institution towards women. Often sex bias is transmitted by well-meaning counselors who pass on stereotypes about men and women. They may be unaware of the growing body of research which is shedding new light on motivation and

achievement of women. Often counselors are trained only to work with the "traditional" student, a label which often does not apply to older women returning to complete their education or women with child care and family responsibilities.

No matter what stand HEW takes on direct (or indirect) intervention to alleviate sex bias in counseling, voluntary steps by schools would be consistent with both the spirit and letter of Title IX. For example, they might develop programs to train their counselors and other staff members to be more sensitive to their own biases and those in materials they use.

Pietrofska and Schlossberg (1970) found that counselors, too--both males and females--function with the same stereotypes as do others in society. A second study by Pietrofska and Schlossberg (1972) found that counselors still favor women whose occupational aspirations conform to the sexual stereotypes.

Olesker and Balter (1972) stated that female counselors seemed to be more empathetic with the needs of their women clients. Counselors attempt to discourage women aspiring to "male" occupations, either by actively discouraging them or by ignoring their choices (Patterson, 1973). In addition to this, counselors do not assist women in preparing for the discrimination which exists in today's work world.

Astin (1976) states that even interest inventories have been severely criticized of late as "their empirical development limits their value for women; indeed, because they offer her relatively few occupational options, they may have a restrictive rather than broadening effect on her thinking about alternatives."

Recently, the National Institute of Education devoted a book to these critical issues of "Sex Bias and Sex Fairness in Career Interest Measurement."

Other guidance materials and texts also contain sex bias. One simply has to leaf through the Occupational Handbook. Berk, Cooper and Tanney (1973 and 1975) point out than not only are men the main characters seen in this widely used guide, but also they are often the ones depicted as doing exciting and challenging tasks. Women, of course, are shown in the stereotypic manner--often smiling, inactive, and working in a supportive role.

Peruse college tests and note the lack of females in illustrations and the dearth of contributions made by women. Many tests still use the generic "he" or man, regardless that studies by Schauder and Hacker (1973) indicated that man meant male to students--not human beings of both sexes.

Sociolinguists (e.g., Farb, 1974) have recently examined the English language and state it is indeed "a sexist language that expressed stereotyped attitudes toward one sex at the expense of the other" (p. 142).

Astin (1976) also points out that university and college catalogues occupy more space for men than women.

Patricia Harris (1974) states that the university has turned out to be one of the "most sexist institutions in the country." According to Harris (1974),

> . . . Although women have been present in college student bodies in significant numbers through most of this century, and even though the performance of women on tests of intellectual ability tends to be better than that of men, women are second-class citizens in higher education.
>
> Despite the theory that coeducation changes men's attitudes toward women by convincing men that women are their intellectual equals, all of us who are the products of coeducation know that this is not the case. The university has managed to operate in semi-isolation from the reality of the world in which the men and women will operate when they leave the campus. In fact, the classroom has tended in its coeducation to operate in isolation from the very institution of which it is a part, because that institution almost invariably is run by men, classes are taught by male professors, and the message is given directly and indirectly that college is an interlude for women who seek intellectual equality and thus they had better cherish it in the classroom because they will not see it again. Male professors still mourn the fact that their brilliant female students are female because, they still say, these women will waste their education by getting married and having children. So certain are they of the role to be played by women that they seldom recommend women for fellowships and almost never invite them to return to teach in the department in which they showed great promise.
>
> Both male and female students receive a clear message from the university that men will use their brains and women will waste theirs. The young man may well marry the

> smartest girl in the class and spend the rest of his life killing himself to prove that she was not wrong in marrying him, by working to become as rich and famous as he knows she would have become had she been born male. Acceptance of the fact that women may choose to assume roles that have traditionally been male roles--such as lawyer, college president, dean, newspaper publisher, hospital administrator, prime minister, judge--is still difficult for many men.
>
> Much to my surprise, I have discovered that male academicians and academic administrators (they are not always identical) are among the most insecure men when confronted by the aspirations of women. Although they usually rationalize their insecurity in a generalization about wanting only "qualified women" on the faculty, many male faculty members of every rank react to the possibility of a faculty with a higher proportion of women with much the same emotion that legend assigns when an elephant is confronted by a mouse.

Furthermore, Harris states that,

> Respect for a productive intellectual life for women and assurance of the opportunity for women to match performance to capacity are essential if higher education for women with men is to have any new meaning. The opportunity for free and meaningful choice of career can be provided for women, if men join in insisting on these rights. If education for women and men is to have any meaning in today's world, it must have the goal of providing real equality between its male and female students in college and after graduation. No longer can women accept the idea that they are educated for the purpose of providing their husbands and other dinner partners with sparkling conversationalists or for the purpose of producing educable male children. Faculty, administrators, and fellow students of the new woman student must accept the reality of women's demand that their education prepare them for the same kind of life for which men are prepared: a life as a productive citizen, only one of whose roles is that of producing and rearing children.

McGrath (1976) summarized the plight of the female student in the university; according to McGrath, the search for educational accessability for women has fluctuated rather than improved. According to McGrath, the Carnegie Commission has concluded that American women have been disadvantaged as individuals in the American university.

Not only are women faculty decreasing in numbers from American campuses, but their status on these campuses has not been commensurate with their capabilities nor equal to their male colleagues. Sandler (1972) reported the following data regarding the percentage of women by rank in higher education. Women hold 43% of the instructorships, 23% of assistant professorships, 15% of the associate professorships, and 9% of the full professorships. Thus, we see that women are not only underrepresented but also are concentrated with the lower academic ranks. And, unfortunately, the numbers of women in both associate and full professorships is decreasing instead of increasing (Macauff, 1977).

There is no doubt that more role models are needed in higher education for women students. Austin's (1969) study found that women doctorates had been influenced in their decision to strive for a career by role models. Theodore (1971) suggests that role models and women professors' support play a significant role in the making of the professional woman.

Higher education, however, is comprised primarily of male faculty. The U.S. Department of Health, Education and Welfare indicates that women only comprise 22.5% of faculty who hold professorships.

The May issue (1976) of the Chronicle of Higher Education refers to the Todd-Lipset Survey that women faculty care more than men faculty about minority issues. And so, the vicious cycle continued.

Thus, we find many female students entering higher education with vague career plans and an unrealistic attitude regarding the world of work, meeting with male college professors (often advisors) unsympathetic to issues which are important to their female students and who often do not give them the support and encouragement they need. "Along with their greater affirmation of men students, men faculty generally are not in tune with issues that affect their women students" (Chronicle, April 5, 1976).

Austin (1976) further suggests that women students face special problems for which special solutions may be required. An institutional failure to accommodate to women's needs may result in lower educational attainment. In light of the data presented which indicates women students do fail to receive degrees more often than male students, it appears that unmet needs do exist. Austin believes that because of low percentages of women on college faculties, women students are less likely to have role models to follow. Instead they turn to male faculty who often do not give them the support and encouragement they need. She indicates that evidence exists (1) that male faculty tend to look down on their women colleagues and (2) that this hostility or indifference is perceived by women students.

Because they feel they are not taken seriously, women students may drop out of school. According to Austin, the lack of faculty acceptance has especially adverse effects on women graduate students. Without support of a mentor-protege' relationship such as men frequently develop with faculty sponsors, women may simply be discouraged from continuance in graduate study (Austin, 1976).

In addition, unfortunately for women, male faculty are not in tune with issues affecting their women students. An article in the Chronicle of Higher Education (January 24, 1977) based on an analysis of four institutions, also states that most colleges are dominated by male professors who in general are "relatively" insensitive to issues affecting their women students and female colleagues. In addition, the Survey of Teaching Faculty compiled by the American Council of Education states that, "Opposition to the changing role of women has not disappeared, but merely gone underground."

In spite of the fact that more women are entering college, graduate and professional school, in greater numbers than even before (50 percent of the enrollment in 1975), women are still less likely to receive degrees than males (Chronicle of Higher Education, 1977). The U.S. Office of Education provides data on specific degrees conferred in areas of study in higher education for males and females.

From this information, it seems apparent that women who do obtain degrees are concentrated in curriculums which would lead to jobs in more traditional employment areas for women. (See Exhibit 1.)

Exhibit 1.

A. Sex Stereotyping in Curriculums

DEGREES CONFERRED BY HIGHER EDUCATIONAL INSTITUTIONS
1970-71 (U.S. Office of Education)

Field of Study	B.A. and first professional		M.A.		Ph.D.	
	Women	Men	Women	Men	Women	Men
Agriculture, natural resources	539	12,171	144	2,314	31	1,055
Architecture, environmental design	667	4,911	234	1,481	3	33
Biological sciences	10,571	25,462	1,943	3,812	595	3,050
Business management	10,805	105,906	1,045	25,609	23	787
Communications	3,813	6,989	642	1,214	19	126
Computer and information sciences	324	2,064	164	1,424	3	125
Education	132,236	45,402	50,020	39,047	1,355	5,043
Engineering	403	49,954	185	16,272	23	3,615
Fine and applied arts	18,169	12,278	3,165	3,313	138	483
Foreign languages	15,285	5,148	3,126	1,653	297	484
Health professions						
Nursing	12,029	245	1,511	31	1	6
Pharmacy	951	3,642	40	154	1	93
Dentistry (DDS or DMD)	46	3,731	--	--	--	--
Medicine (MD)	829	8,157	--	--	--	--
Home Economics	10,970	301	1,365	88	75	48
Law	1,320	16,877	46	909	--	20
Letters	44,782	26,616	7,328	5,415	567	1,849
Library sciences	932	81	5,713	1,315	11	28
Mathematics	9,494	15,424	1,524	3,677	93	1,106
Military sciences	1	356	--	3	--	--
Physical Sciences						
Chemistry	2,695	9,088	492	1,792	173	1,987
Physics	343	4,733	152	2,042	43	1,439
Psychology	17,037	21,117	1,651	2,787	427	1,355
Public affairs and services	4,566	4,737	4,099	4,307	43	135
Social sciences						
Economics	1,912	14,046	262	1,735	53	668
History	15,749	29,192	1,693	3,476	120	871
Pol: science, govt.	5,564	22,072	479	1,839	85	615
Sociology	19,959	13,703	677	1,132	119	455
Theology	1,135	7,664	661	2,049	6	306
Interdisciplinary studies	4,117	9,967	600	1,106	14	77
TOTAL	370,000	513,975	92,896	138,590	4,579	26,534

Chapter 2

BACKGROUND

Background at Montana State University and Montana

Montana State University is a state-supported coeducational institution located in Bozeman, Montana. Bozeman is one of the largest cities in Montana with its population totaling twenty-five thousand (25,000) including ninety-eight hundred (9,800) students. The University began as the Agricultural college of the State of Montana in 1893 and in earlier times was informally known as the "Moo" college. The emphasis at that time was in agriculture and mechanical arts. The University received its present name, Montana State University, in 1965. Today it is the largest of all of the nine state-supported institutions.

As a land-grant institution authorized by the Morril Act of 1862, Montana State University derives its support from biennial state legislature appropriations, student fees, federal land-grant income and from private and other grants.

Today, Montana State University is a multi-purpose institution offering widely diversified curricula leading to the bachelor's degree in 45 fields covering some 119 separate majors, master's degrees in 33 different areas and doctorates in 19. Undergraduate instruction is administered through the College of Agriculture, Arts and Architecture, Education, Engineering, Letters and Science, and the Schools of Business and Nursing. Students who have not decided upon a major enroll in General Studies. Students working toward an advanced degree enroll in the College of Graduate Studies.

Our academic faculty now numbers more than five hundred (500) persons, with another two hundred (200) professional staff members engaged in research activities. Both undergraduate and graduate degrees are awarded in various fields.

MSU, as it is called, is located in the quiet city of Bozeman, Montana. It is a community with little industry, located in a farming

center which boasts very rich farm land. The population is largely dependent upon the University for the support of the businesses and local services. Bozeman serves as the shopping area for a large geographical area. The largest and most metropolitan city in the state is Billings. Billings is approximately one hundred fifty (150) miles away and has a population of around sixty thousand (60,000) persons. The only other sizeable towns nearby are Butte and Helena each approximately twenty-five thousand (25,000) to thirty thousand (30,000).

Bozeman is a conservative community still influenced by some of the decendents of the very first settlers who came to the area only about a century ago. A strong atmosphere of isolation from the rest of the world prevails. Living in the area makes it very easy to stay cozily tucked away in this lush valley surrounded by beautiful mountain ranges and forget that, in fact, there is a large world of which we are an integral part.

Extremely important to note is that Montana is mainly a rural area; its predominant industry is farming and ranching, with tourism continually playing a greater role in the economy of the state. Although it is the fourth (4th) largest state in the United States, its total population is about eight hundred thousand (800,000) people, placing it 44th in population. The state is composed of small communities spread throughout the geographical region. In fact, there are no cities in excess of sixty thousand (60,000). (See Appendix A). Clearly it is geographically isolated from metropolitan areas where many jobs and non-traditional role models are located. Because of the distances between cities and the limited exposure to different occupations, students are strongly influenced by parental and societal expectations. Usually, they come to the university with a very poor background and exposure to different occupational choices and concominant lifestyles. They rarely have seen other than traditional role models.

The population according to 1970 consensus figures was composed of 27,130 Native American Indians living on seven reservations within the state. According to Malone and Roeder in Montana: A History of Two Centuries, "By 1910, slightly over one-fourth of Montana's population was foreign born." The people of Montana are hearty,

hard working, independent, and loyal. They place great importance in clear skies, natural beauty and the freedom to do as they please. A "pioneer spirit" has always prevailed. Furthermore, our people often grow to love the freedom, clean air, climate changes, ruggedness and independence they experience here.

Unfortunately, the limited job market cannot absorb all the students who desire to remain in Montana upon graduation. Career development then, becomes even more complex for we have the added challenge of not only helping our male and female students become aware of different kinds of careers open to them but also see that they could perhaps be happy in an area other than Montana.

Profile of Montana State University Students

The typical student who enrolls at MSU, as described by the Cooperative Institutional Research Program, is from Montana and lives from one hundred (100) miles to over five hundred (500) miles from campus. A high percentage of these are rural students and come from small towns but some also from farms or ranches which may be twenty (20) to twenty-five (25) miles from a neighbor and fifty (50) or more miles from the nearest town. Most of them see themselves as middle-of-the-road to conservative with regard to political orientation. They are usually hard working but naive. In addition, the survey shows that freshmen attending Montana State University tend to rate themselves lower than does the average college freshman.

The career choices reveal that 27% of the freshmen men prefer engineering while 4% of the women chose this traditionally male occupation. Women outnumber men in a choice for business with 17% of the women and 11% of the men pointing to that as their career choice. This is due in part, however, to a substantial number of women enrolling in a two-year secretarial program, which is within the School of Business. Agriculture has 17% of the freshmen men and 5% of the women listing it as a choice. Likewise, the non-M.D. health professional fields interest 18% of the women and 5% of the men. 13% of the women and 4% of the men indicated education as their choice. From the above data, one can see that sexual stereotyping and biasing

with regard to career choice is still far too prevalent among freshmen entering Montana State University. "Summary of Total Net Enrollment by College/Curriculum/Option for Autumn Quarter 1978 to October 14, 1978" can be found in Appendix B.

The Agricultural and Engineering Colleges have been well known for their outstanding and well trained graduates. This reputation has perpetuated repeated visits by recruiters to Montana State University in those fields and it is in these areas where the primary emphasis has been placed by MSU in job placement. The major exception to this is in the field of business. The competency of the MSU graduates has spread and as one could expect there is an increased number of interviewers to this campus in this field. In general, students in other fields are basically "on their own" when finding employment. More serious perhaps is that they have had but few opportunities to become aware of the many career opportunities open to them.

Per capita support of most educational programs in Montana is very low compared to other states. This is even true of the Co-operative Extension Service even though Montana is a predominantly rural state. Montana as a state is conservative, provincial and very slow to change. In fact, it appears to fight change at times. An example of the hesitation to change can be pointed out by citing the attitude toward the Equal Rights Amendment which was approved by a vote of the residents of the state four years ago. This was after a discussion in the legislature which drew national attention when one Senator spoke loudly that, "If God had wanted women equal, he'd have made them equal." Two years ago attempts were made to rescind the previous approval of ERA and again in 1977 another attempt to rescind the approval drew much attention when a freshman legislator who by profession is a minister, stated that passing the ERA "will lead to homosexual marriages." ERA has been a topic at the four legislative sessions since 1973 with violent objections to the ERA voiced each time. In 1977 it was finally "put to bed" and passed.

The students of Montana State University and the university itself are representative of the State of Montana in its views towards sexual roles of its citizens. Montana has long been a state of "Old West Culture" and machissmo values. Traditional sexual roles are maintained and resistance continues towards the liberalization of these attitudes.

Enrollment and Student Body

It is clear after reviewing a printout on student enrollment, by sex, and department, that Montana State University students are choosing very traditional - male and female - occupational choices. (See Appendix B). For example, most females are enrolled in education, home economics, nursing or some specific departments within the liberal arts college. A predominant number of males, on the other hand, are enrolled in agriculture, economics, engineering and business. This is not surprising when one stands back and views the male dominated environment which prevails at Montana State University.

There are a few role-models for female students at Montana State University. Female students need mentors . . . other women who they can look up to, act like, talk to and want to be like. Unfortunately, there are few "significant" others for our undergraduate or graduate women. Female students need the opportunity to meet other successful women who can provide encouragement, give information and discuss "how doors can be opened." Because this is impossibl at this time, an alternative strategy must be developed so that our young women on campus can explore themselves, their strengths, weaknesses and investigate new career choices which could be open to them.

There also is no doubt that the appropriateness of student curricula decisions related to their career plans is directly related to the quality of advising the students receive in their early college years. The need for helpful, meaningful advising has been well documented. Students who have trained advisors "to talk with" have greater college success in several areas. The Morehead and Johnson study,

(1964) demonstrated that a systematic program of faculty advisement resulted in a significantly higher academic record for the systematically advised group, and a lower drop-out rate among these students. Results similar to these were reported by Brown (1965). However, in the Brown study the advisers were trained upper-classmen.

Results relating to career placement were found by Rossman (1967), which demonstrated the positive effects of a systematic advising program for college freshmen. In addition to lowering the drop-out rate, students in the advising program were significantly more likely to seek out assigned advisors with questions concerning career planning.

In a study which was directly related to the Task Force goal an actual training program for advisors was conducted. This research done by Gelwick (1974), provided a three stage training program for advisors. The advisors were systematically trained in career theory and research; intensive career in the group setting; and supervised miniature group marathon with students. This third state was the application of stages one and two. The students responded enthusiastically to the project and felt that they had gotten to know themselves and their needs better; and at the same time they began to know their advisors at a much deeper, more meaningful level. Closer advisor-student contact laid the ground work for more meaningful continual advising.

Although no systematic training program for advisors is available here at Montana State University, the need for one is clearly felt by the Commissioner of Higher Education in the state. A recent study by Cohn (1975) for the Commission of Higher Education states these pertinent facts regarding career development and student advising in institutions of higher learning in Montana. It was noted by many of those interviewed that universities and colleges, remaining close to past traditions, are graduating students in fields that are overcrowded and that they fail to advise their students of job probabilities. In addition, the report goes on to state:

College advisors and counselors also play an important role in relation to the relevance determinant to success. For the accessibility of a student and his continuing success in an institution of higher learning can often be directly linked to quantity and quality of advice and counseling that he receives while in college. The crucial period of receiving direction and counsel are during a student's freshman and sophomore years. Many of those interviewed expressed concern that advice and counseling by those assigned as college advisors on the campus is of poor quality and entirely non-existent. The only occasion that many students get an opportunity to meet their advisors is while scheduling their classes. Others simply fill out their own schedules and forge the signature of their advisor. The common complaint of many students on college campuses is that they cannot find their advisor or even make an appointment with them when they are seeking help and advice. Many students claim they are assigned to advisors who have no knowledge of the student's field of study or major and thereby soon lose all interest in the student. Yet most students, if they search long enough, will eventually discover a professor or older friend who, indicating an interest in the student's career, can aid them in the course selections and future needs.

As a result of the Commissioner's study the following recommendations were submitted:

1. That a program be initiated and developed that will establish a quality advisory and counseling staff for students especially in the first two years of college.
2. That possible incentives for better advisors might include reduction of class load or increase in salary.
3. That a system be developed whereby a student given a normal projection of his future job probability in his chosen profession.

It seems to be clearly demonstrated that not only is a trained system of student advising essential in helping the student to make wise career choices, it also promotes student success in many areas. The training of faculty and advisors at Montana State University is sorely lacking and is a primary need as indicated by the Commissioner's Office of Higher Education.

Presently, academic advisors at MSU are provided little or no training or experience in dealing with students. Most have expertise in their subject matter only and have had no training in interpersonal communication skills, career opportunities or understanding student problems in career development.

Our faculty, like many other faculties has its share of "good" and "bad" academic and career advising. Many of them, according to our student undergraduate and graduate Task Force representatives, have a high number of advisees, and often simply "sign cards." Some lack the "know how" and interpersonal skills so necessary for positive student-faculty relationships. In addition, faculty are not "rewarded" for quality advising and counseling. In the present MSU Faculty Handbook (p. 56), "Effectiveness of Advising" is listed eighth under the heading Teaching in Relation to Evaluation of Faculty Performance. On page 89, under Academic Policies, the following statement can be found regarding student conferences:

> "Faculty members are expected to make time available for student conferences. Office hours should be convenient to both students and instructor with the opportunity provided for prearranged appointments. Available conference time should be communicated to students."

Obviously, little value is given to the advising of students as important criteria for promotion and tenure as quality advising has indeed not been "operationalized" as important criteria in determining promotion. Too often the pressures of teaching and research--seen as credible and rewardable within higher education--often take precedence. So again, the student is the loser.

Our students want and need more contacts with the faculty! Anyone can "sign" a registration card; students want faculty to use as role-models and mentors, even friends. Furthermore, they want to talk with the faculty about their confusion in career choices, and need to hear from faculty about the kinds of opportunities, lifestyles, value conflicts and rewards in the particular program they have chosen. Faculty serve as critical "role-models" to students and as in many cases they are the only real-life personal representatives of a particular field or program.

We also find that a considerable number of our professors are "out of contact" or "unaware" about the world of work within their academic areas of specialization. Many of them have progressed from one academic institution to another and although are fine academicians and researchers, have never had work experience outside of higher education. Many lack awareness of the career opportunities, choices, lifestyles within their fields.

Thus, our faculty will need new information and knowledge if they are to play a more active role in career education. Some also will need increased skills and expertise in listening to what their students are saying. Equally important is to either change the system so that academic and career advising is seen as credible criteria for rewards and promotion within MSU or an alternative system for advising be developed.

Two recent reports on MSU students' needs around career concerns come from the ACT and some investigative work by the College of Business Policy Class as well as input from Task Force members. Seniors in the College of Business pointed out the need for career exploration and information at the freshman and sophomore years, particularly first quarter of the sophomore year. They also indicated another crisis occurred at the beginning of their senior year. Here their specific interest areas were in need of a process whereby their specific career choices could be identified. In addition, they wished for substantial time in developing interview and resumé skills. These same seniors also stated a need for more faculty contact as an improved quality of advising.

In addition, a large percentage of MSU freshmen and sophomores indicate that indeed they have unmet needs with regard to career concerns and choices!! On the ACT (1978) 51% of the MSU freshmen students stated they had concerns about career and educational decisions. This was 7% higher than the national returns for freshmen.

The General Studies Student - A Logical Target for Career Education

Of the 3433 freshmen (1839 male; 1594 female) entering Montana State University during the fall of 1978, 675 students (324 males and 351 females) had the courage to state that they were undecided in their choice of major! How many more did not have that courage, and are enrolled in a curriculum where they are facing possible failure or great unhappiness is unknown.

During fall 1977, in addition to these 675 freshmen, the Department of General Studies also had 410 other students: 163 of these were sophomores, and there were 247 graduate non-degree students and special students. The nature of this population singles the General Studies student out as the most identifiable, and the most needy student of some type of vocational advising and career development program.

The reasons for these students indecision are complex, of course, but one can pinpoint several contributing factors which seem to be implicated in the general confusion existing in career choices:

1. The exponential expansion of job descriptions, many with narrowly defined educational or experiential requirements.
2. The lamentable lack of interaction with role-models, such as faculty, parents, grandparents, aunts and uncles, family and friends caused by the age stratification in our society and the prevalence of the nuclear family unit.
3. The generally poor performance (for whatever reason) of the high school guidance programs, particularly in regard to career education/counseling.
4. Admittance of the underprepared student, who, without proper career counseling and remedial coursework is doomed to an experience in failure and frustration. A university such as ours, with a long history of the open admissions policy, is the recipient of a disproportinate number of underprepared students. Obviously, one could list many additional contributing factors.

What do we currently have to offer the undecided student?

The General Studies Advisor: With a ratio of 500:1 students to advise, it becomes difficult to get more than a small share of an advisor's time. Most of the contacts occur during the pre-registration periods when valuable time has to be spent on "filling in the blanks." Students are encouraged to come in during the quarter for individual conferences but other university responsibilities of the advisor puts severe time limitations on such conferences.

In spite of the fact that MSU has Testing and Counseling and Placement services, it has not adequately focused upon the total career education needs of its students. The main interest of the Testing and Counseling staff has been in assisting students in dealing with their emotional and psychological adjustment problems, rather than dealing with vocational education, career development and counseling. Too, the staff has had little training and experience in strategies for workshops of this type. At this point in time, the typical career counseling at MSU has meant the administration of the Strong-Campbell Vocational Interest Inventory, along with a personality test such as the Edwards, with subsequent discussion and initial career exploration. However, what has been done in a traditional approach has been of high quality! Nevertheless, a comprehensive developmental approach of career education has simply not been undertaken and implemented. Most MSU students simply do not get the help they so desparately need in order to make important career decisions.

With regards to the Placement Center, it too, because of limited staff has waited until the senior student "walks in". At this time the center mainly serves as a "recruiting and employment center" for seniors seeking employment. The Director describes the services as "fragmented". The staff does provide an interviewing skills class, taught in the School of Business, during the spring quarter and a career outlook course. The Placement Service also offers students additional services such as career information, help in writing, typing and the reproduction of resumes, keeping resumes and the

maintenance of a placement folder. The staff will talk to departments when requested and also offer continual job placement assistance to MSU alumni.

The small staff of the center (two) plus secretarial help simply does not have the time and experience to branch out into much needed career education, counseling and development aspects. Appendix D provides placement data for the past two years. As one can tell, placement is much higher in agriculture, business, engineering and education as compared to other fields.

Thus, our efforts at MSU for the development of career concerns of our students have been fragmented and piecemeal; they have reached only a small percentage of the students who indeed have needs for a total career education model. The loser, of course, is the student!!

Students are also referred to Department Heads or other faculty members to explore different curricula. What kind of "selling job" they receive is a mixed bag of blessings; often faculty are concerned with increasing the enrollment in their field rather than to really "listen" to the student's needs. In addition, we have the advisor's own sexual stereotypes and biases with regard to what is "right" for a man and woman. Also departmental advisors may have little interest in or time for the student whose interest in a field is exploratory.

As stated previously, review of the literature strongly suggests that most male professors are not sensitive to women's needs and maintain the same myths and stereotypes that other males do. Too, they often are simply misinformed--they simply do not have adequate information. The picture becomes clearer--traditional female and male students from Montana meet with traditional male advisers--the advisors, consciously or unconsciously encourage the young men and women to go into traditionally oriented fields. And so the story goes . . .

The purpose of this study was to reduce sexual stereotyping and biasing with regard to career choice at Monana State University in selected faculty and General Studies students. What we did was

develop intervention strategies at a number of different levels in an attempt to break the above mentioned vicious cycle. In general, we provided career training and knowledge to approximately 100 General Studies students and to 60 faculty advisors, mostly department heads, assisting them in becoming increasingly aware of themselves and their sexual biases with regards to career choice.

In addition, the forementioned General Studies students had the opportunity to participate in a series of career-life planning workshops; the goals of these were increased self-awareness, including career testing and feedback recognition of alternative career choices, reduction of sexual stereotypes and biases with regard to career choice and the opportunity to learn how to make decisions.

Special mathematics support was provided to all students in the program in order to not only aid them in attaining mathematics proficiency through the intermediate algebra level (and thus gain entry opportunities into 57 MSU curricula) but also to reduce concerns and anxieties associated with learning this important subject.

Intensive academic and career advising (three guidance sessions for each student each quarter) provided the personal support students needed to undertake effective career exploration and obtain appropriate academic preparation for their choices. Our students were assisted in realizing that career education encourages exploring <u>all</u> alternatives and making tentative choices. They were helped to become aware that "a choice" involves full exploration of oneself--one's strengths, weaknesses, interests, values, lifestyles, skills and abilities. This process was a continuous one and was effected by self assessment and faculty input, course work, career counseling and most important, individual decision making.

Chapter 3

METHODOLOGY

Introduction

In the Spring of 1978, the Office of Career Education awarded an HEW Career Education grant in the amount of $86,052 to Montana State University for the funding of a demonstration project entitled: "The Reduction of Sexual Stereotyping with Regards to Career Choice in a Land Grant Institution of Higher Education" for 12 months commencing September 1, 1978 and terminating August 31, 1979. This project was undertaken by the Office of Student Affairs and Services and administered by Dr. Peggy Leiterman-Stock, Assistant Dean of Students.

The project had four major components: career and academic advising a minimum of three times per quarter; participation in a specially designed mathematics program; participation in one career-life planning workshop (6-3 hour workshops held each quarter); and development of two (2) workshops for approximately 60 faculty and administrators. In addition, we developed a career seminar that many of our students (65) enrolled in.

Both career-life planning workshops and faculty workshops were designed to determine if current information regarding men and women, their achievement patterns and needs in the world of work, coupled with an examination of one's own stereotyping and bias, could effect both attitudes and behavior of both students and faculty who participated in the STEPS TO SUCCESS Program. Too, it was hypothesized that the opportunity to examine one's strengths, weaknesses, values in the presence of current career information would result in more appropriate, mature and realistic career planning and choice.

Hopefully, experience, age and quality career education programs contribute towards improvement in choice competencies and attitudes

resulting in career plans which are more congruent with individual needs and abilities. Evaluation of the above programs will aid in determining the effectiveness of the STEPS TO SUCCESS Program. A corallary part of the study was to determine if both students and faculty who participated in the study expressed a reduction of sex role stereotyping and bias as compared to control groups not receiving this treatment.

Procedure

Administrative Faculty

The population for this facet of the study consisted of 53 administrators, department heads and faculty. Of these, 25 were women and 28 were men. Participants were chosen by the Affirmative Action and Human Resources Officer as well as the Project Director for their perceived attitudes with regards to sex role stereotyping and their perceived credibility on campus. Attempts were made to balance both groups so that one workshop was not more or less biased than the other.

Faculty Workshops

The two, two-day workshops which served as one of the interventions for this demonstration model project took place April, 1979. The first of these workshops took place April 16 and 17; the other the very next two days. Both were held at Fairmont Hot Springs, a popular resort area in southwestern Montana.

Consultants for these workshops were Drs. Sunny Hansen and Thomas Skovholt, both from the University of Minnesota and well respected professionals in their fields.

Invitations to faculty concerning these workshops were sent by the President and Academic Vice President of Montana State University. Faculty were then requested to respond to the President's Office with regards to their participation in these workshops.

The workshops began at 9:00 AM each day and terminated at 5:00 PM each day. Lectures, experiential exercises in both large and small groups, as well as video tapes were included as part of the workshop format. The consultants varied the activities so that peoples' interest and energies were maintained.

Pre and Post testing for these workshops were administered at the very beginning and end of these workshops. A workshop evaluation form was also administered at the termination of both workshops.

The format for these workshops was as follows:

DAY 1

9:00-10:00	Introduction, data gathering, structuring, and goal setting (Sunny, Tom)
10:00-11:00	Learning Strategies: Inhibitors-Facilitators of Career Development. Graphic representation of one's career development-small group-men and women (Sunny, Tom)
11:00-11:15	Break
11:15-12:00	Presentation: Career Development and Sexual Stereotyping; Discussion (Sunny Hansen)
12:00-1:00	Lunch
1:00-1:30	Brief overview of BORN FREE (Sunny)
1:30-2:30	Videotape: BORN FREE-A World of Options; Discussion (Sunny)
2:30-3:00	Break
3:00-4:15	Presentation: Men's Development--a Perspective and some Themes (Tom)
4:15-5:00	Discussion and Summary (Sunny, Tom)

DAY 2

9:00-10:00	Learning Strategies: Magic Seminar-Groups of 6-8-men and women (Sunny, Tom)
10:00-11:00	Presentation: Career Development of Women (Sunny)
11:00-11:15	Break
11:15-12:00	Learning Strategies: Career Fantasy (Tom)
12:00-1:00	Lunch

1:00-2:00	Videotape: The Joy of Choosing; Discussion (Sunny)
2:00-3:00	Learning Strategies: Physical Continuum or Resistance to Change (Tom, Sunny)
3:00-3:15	Break
3:15-3:45	Mini-lecture: Change Process (Sunny)
3:45-4:30	Learning Strategies: Institutional Facilitators and Inhibitors (Sunny, Tom)
4:30-4:45	Summary and Wrap-up "Masculine and Feminine" (A reading) (Sunny, Tom)
4:45-5:00	Workshop Evaluation (Peggy Leiterman-Stock)

Faculty and Staff Facilitators

At the beginning of the academic year all faculty and staff were sent letters informing them of the nature of the project. Soon thereafter, a letter was sent to faculty, staff and graduate students informing them about the opportunity to learn facilitation skills. A committee composed of the STEPS staff as well as other General Studies staff assisted in choosing the faculty facilitators. In the case of faculty minimal pay was involved; there was no pay for graduate students.

Facilitator training was accomplished in two ways. During fall quarter, facilitators met with two (2) senior trainers three (3) hours per week for 6 weeks. Pre and post testing occurred during the first session and during the final critique session at the Project Director's house.

In light of this critique facilitator training dates were modified. During winter and spring quarters, the facilitators participated in a two-day weekend training (Saturday and Sunday, 9:00 AM-5:00 PM).

During both training sessions the faculty "went through" the design, just as the students would do. However, after each exercise or activity, considerable time was spent in discussing the "why" and then "how to process" or discuss the material brought out by the students. In addition to this formal training, facilitators met for 30 minutes before each session to review the evenings activities and exercises as well as meeting briefly after each session to "clinic"

how their particular group went that night and to answer any questions or issues which may have arisen during the evening. In addition, a pot-luck supper was held from 4:00 PM-9:00 PM at the Director's home where a general "open critique" of the design and training was held for each group of facilitators. Pre-post testing for those who participated in the weekend sessions were administered first thing Saturday morning of the workshop and again (post) at the critique session at the Director's house.

Students

In addition to the 83 administrative faculty, 117 students were involved in the project. Students recruited for this project came through the Department of General Studies. They were solicited during the summer through flyers and letters being mailed to them at home, presentations in all summer orientation sessions, and leaflets in mailboxes; meetings were also held with resident hall advisors informing them about the nature of STEPS as well as it's scope and benefits. Articles were also placed in both school and local newspapers as well as program descriptions in both local and university radio stations. Too, every faculty received flyers about the program so that they could make appropriate referrals.

In fall, 1978, we had 117 students; 45 male, 72 female. In winter, 1979, this number was reduced to 104; 39 male, 65 female. By spring, 1979, our final count was 85; 55 female, 30 male.

Pre-testing of all STEPS students was done one of two ways. Initially students were sent a notice concerning a general STEPS meeting; for convenience students could have selected one (1) of four (4) time periods. A large number of students "did not show" for these sessions. Thus, the Assistant Director scheduled immediate individual sessions and all pre-tests were completed during these times. Thus all pre-tests were completed by the end of October, 1978. Post-testing was administered in the same manner and was administered during the month of May, 1979.

Career Life Planning Workshops for Individual Students

Our model consisted of six (6) three(3) hour career life planning workshops (18 hours total) each quarter designed to assist students in discovering their strengths and weaknesses, interests, values, life-style choices, and examination of their own sex bias and stereotypes with regards to career choice. The workshop format consisted of four to five students working with a trained faculty facilitator in a series of structured exercises, activities,lecturettes, films and videotapes designed to assist students in exploring the above. In addition to the exercises designed to bring about increased career maturity and awareness, students spoke with men and women from the world of work (fifth session). The following career areas from the "world of work" were represented in the fifth session throughout the year:

Agriculture
Architecture
Beautician
Biology
Business; Marketing, Management, Accounting
Construction
Counseling
Ecology
Education; Elementary and Secondary
Engineering Disciplines
Fashion Merchandising/Design
Fish and Game
Forest Service
Home Economice; County Extension Agent, Dietician
Industrial Arts/Design
Insurance Sales
Interior Design
Journalism
Mechanics
Military Science
Modeling
Nursing/Family Planning Nurse Practicioner
Photography
Physical Education; Athletic Director, Coaching
Physical Therapy
Plant and Soil Science
Psychology

Real Estate
Sociology
Social Work
Travel Agent
Writer

The following areas were the focal points of the sessions:

Session I - Understanding the influences of the past and present; first impressions; development of group trust.

Session II - Self evaluation; diagnosing and understanding values.

Session III- Self evaluation; skills, interests; career resources; occupational choice game.

Session IV - Diagnosis and Effects of Sex Role Stereotyping in both men and women.

Session V - Career Action Preplan; Interview Form; Interviews with people from the "world of work".

Session VI - Setting Priorities: Ways of Being in the Next Months, year or two; My Future Life Inventory Summary Sheet (including resolutions for the future).

The design was modified each quarter based upon the recommendations and comments of both students and facilitators. There is no doubt the design improved each quarter.

In particular the session on Reduction of Sex-Role Stereotyping "Bias" improved considerably the last session. This was in part due to the learnings gained from the faculty workshop, and to the fact we simply improved each quarter. The difference between these workshops was significant in that the last workshop stressed the effects of sex role stereotyping on both men and women. In fact, a male member of the faculty (Dr. Robert Stock) spoke informally about the effects of male socialization on him which seemed to deeply effect both male and female students.

Other design modifications also stressed the effects on both men and women. (See Appendix). These seemed to decrease the tension and occasional hostility displayed in this particlar workshop the previous quarters.

Career Life Planning: Evaluation

Two basic evaluation questionnaires were given during the Career Life Planning series. Exhibit 2* shows the student evaluation of the Career Life Planning series summarized for the full year. Exhibit 3* shows faculty facilitator evaluations of the Career Life Planning workshops summarized for the full year.

In reviewing student evaluations of the Career Life Planning Workshops it can be said that the Career Life Planning Workshops were a success from the students' point of view. On most items the Career Life Planning Workshops were rated between good to excellent with many items rated as excellent. In fact, about 80% of the items were rated as very good or excellent. Too, 74% of the students had a better idea of what kind of career they wanted as a result of the workshop.

It is especially of interest to note some of the ways in which the time format could be change Here, most of the students did not want fewer sessions. In fact, 79% of the students wanted more sessions and more information. A small number felt that some of this work could be concentrated on weekends versus a weekday evening. In summary, the workshops were evaluated by students as being good to excellent and the individuals' attendance were rated between good and very beneficial. The vast majority of the General Studies individuals found the results to be beneficial and that the information was very useful in their selection of careers.

Exhibit 4*shows a list of 45 participants from various organizations who were brought to Session 5 of the Career Life Planning Workshops in order that the students may be able to talk first hand to professionals in various careers. It was felt that this aspect of the Career Life Planning Workshops was innovative and would provide much learning to individual students. The evaluation bears this out in that over 70% of the students either agreed or strongly agreed that this particular session was very meaningful to them.

It is also of interest to note the attendance records of the students attending the sessions. The attendance records indicated 90.35%

* Appendix B

attendance in Fall, 89.44% attendance in winter and 91.66% attendance in spring. It is believed that the reason for this high attendance record is due to the high quality and informational content of the workshop itself.

Exhibit 3 shows the facilitators evaluation summarized for Fall, Winter, and Spring for the entire year. Again, from the facilitators point of view, each of the six sessions proved to be a valuable experience with regards to helping each of their respective students.

Along with being beneficial for each of the facilitators, all the facilitators found that the training they had received to be excellent, of extensive benefit to themselves, and of extensive benefit to them later on in such activities as advising or student interfacing. Again, from the facilitators point of view, it appears that the Career Life Planning Workshop was a vast success.

It may be of interest to note that the project evaluator was also a workshop facilitator and can personally justify to the quality of the activities and information that was delivered during the workshop.

Recommendations

Some general recommendations include trying to distribute students in such a manner that they are not only evenly distributed with regards to sex, but also with regards to personality style, e.g., balance groups with some quiet, some verbal students, etc. In addition, facilitators and some students recommended giving credit for participation in these workshops. Too, considerable concern was registered by facilitators regarding holding workshops in classrooms. It was suggested that perhaps facilitators could hold their groups in their homes or apartments or in students' residences. Interestingly, this comment was stated more by facilitators than by students.

We also discovered that it was best for the project director to establish guidelines around attendance and other expectations we had about participation in these workshops. For some reason, facilitators had difficulty being clear about their expectations around these issues. There is no doubt that a short introduction about the workshops, their mission and format, misconceptions and expectations by the project director, aided attendance and contributed positively to the workshops.

Session II dealt mainly with values. Somehow this session never developed as it should. Common comments made included, there was "too much listing to do", "the shift from me", "two was too abrupt -- and we need more time on personal values". There is no doubt the film was excellent but should be introduced by facilitators, and--after the film--discussed within the small group. The exercise/activity "Things I Don't Like to Do" should be omitted. Too, The "Career Motives" exercise should have fewer categories; it was suggested it read, "Very Important, Important, Not Important". Finally, all activities pertaining to values should be completed during this session which means some activities simply would have to be eliminated.

Comments regarding Session III dealt mainly with the printed format of the activities. However, when facilitators process this

exercise with their students, it is important that they ask "why did you put this down?" The students and faculty thoroughly enjoyed the "occupational choice" game. It was seen as a marvelous change of pace and students learned a great deal from this activity. It was felt that students "should not be warned about overspending" as this was one way they learned.

With regards to Session IV, the major recommendation is that this workshop be designed so that both men and women see the effect of sex-role stereotyping on themselves as well as each other. Too, it was strongly suggested that we move this session from IV to II. It was felt that this would allow continual reference to sex-role stereotypes throughout the remainder of the workshops. In addition, it was critical to the success of the session that we have a "believable" male and female consultant pair. Other suggestions include more small group than large group work. Last but not least was the suggestion that the questionnaire used in that session be given as "homework" the session before, which would allow more time for discussion purposes.

Generally, all facilitators thought the fifth session was extremely worthwhile. Some recommendations involved getting a greater variety of and more contemporary local small business people like the "Ski Surgeon". Otherwise, all agreed it was important to assist the students in moving to 3-5 individuals that evening.

The last session was used for "summing up" and tieing things together for the students. Some suggestions for this session included:

* Asking students to review all their materials the night before coming.
* After doing the "Priority Pie" have students pull out their 5 most important values to determine if values and behavior match.
* Mail the students "resolutions" to them 3 months after the program terminates.
* Do not do post-testing during this session.
* Less lists/activities.
* More time for discussion.

In summary, these recommendations reflect the suggestions of both facilitators and students who participated Spring Quarter. Our process and our workshops have shifted somewhat each quarter; this keeps them alive, dynamic and ever-changing . . . a process I would not change.

Advising STEPS TO SUCCESS Students

STEPS TO SUCCESS was targeted to serve new Montana State University freshmen in General Studies, a special academic program offering advising services to pre-major students. With few exceptions the STEPS students were from this population. All had volunteered for the program, usually as a consequence of encouraging information they received during one of the 1978 MSU summer orientation sessions. The act of volunteering tended to select a group less proficient in mathematics and perhaps less sure of themselves than the general freshman or General Studies freshmen populace.

Throughout the MSU summer orientation program students had been provided information about STEPS TO SUCCESS through presentations to orientation groups, individual guidance sessions, posters and printed informative materials. A special effort had been made to ensure all summer orientation advisers were well informed about this opportunity. An application form was developed for use by interested students. Along with information about the program this form was mailed to all new students entering MSU General Studies for Fall 1978.

Personal contact between STEPS TO SUCCESS staff and propsective enrollees in the program was considered to be the crucial element in the recruitment process. STEPS staff participated extensively in the Fall orientation and registration for new MSU students including a meeting with all General Studies students, presentation of a mini-career session for all new students as well as participation in three advising/registration sessions for General Studies students. In all sessions STEPS personnel were introduced and described the program. STEPS staff also attended a barbecue for staff of the MSU residence halls.

Participation in the orientation sessions not only permitted direct informal contact with students but also provided STEPS TO SUCCES personnel with "on the job" training in the MSU advising/registration process. It was considered essential that STEPS advisory staff

immediately obtain and establish identity as capable advisers in the MSU mileau. Because of both the extensive previous experience of the STEPS staff and the high level of cooperative support from the General Studies director and her assistant this objective was accomplished easily.

By the start of classes on September 21, 1978, 133 General Studies students had signed up for the STEPS TO SUCCESS Program. This was 13 more students than the initial objective of 120 persons. However, in anticipation of some drop-out from the program and/or Montana State University, additional enrollments were accepted throughout the month. These enrollments were either student initiated or suggested as a consequence of advising interactions with General Studies students. This resulted in a total of 146 persons who had either applied for or expressed an interest in STEPS TO SUCCESS. However, 29 of these individuals chose not to continue their involvements in the program once they were faced with the necessity of making actual time commitments. This left 117 persons (72 women, 45 men) in the STEPS TO SUCCESS program for the Fall 1978 quarter at MSU.

It was considered very important to establish early advising contacts with the STEPS TO SUCCESS students in order to anticipate and mitigate academic, career and personal problems before such difficulties could have serious impact on student success. On September 29, 1978 a letter was mailed to all STEPS TO SUCCESS students introducing the STEPS advisers, requesting an early guidance interview with the student, informing the students of initial organizational meetings (October 4 or 5) and scheduling the students for Career Life Planning Workshops. Addresses obtained from the students applications were augmented with information from the On Campus Living Office. The cooperation of this office meant mailings could be sent at least two weeks earlier than would have been possible if STEPS staff had waited for formal publication of student address lists.

Early in the academic year it became evident that customary styles of advising contacts would not be adequate to obtain the frequency of advising interaction we sought (not less than three career and academic

guidance sessions each quarter). Consequently we became intrusive in our contacts with STEPS students, planning to arrange appointments on the same or next day and continuing to phone (early morning) if appointments were not kept. This approach continued to work well throughout the academic year though phone calls became less important as students became more comfortable about seeking help from STEPS staff.

The STEPS adviser developed a unique form for STEPS students (Exhibit 5*) and kept an independent set of records for those individuals in the program. These records included notes of all guidance sessions, high school records and ACT (American College Testing) scores, the predicted first year grade point averages at Montana State University, MSU grades, study skills and study style inventories.

In terms of traditional advising information, there was a great deal of variation in the academic potential of STEPS TO SUCCESS students. Much of this variation was due to open admissions practices of the University. Thus predicted first year grade point averages for STEPS students ranged from a low of 0.9 to a high of 3.1. STEPS students were from high schools large, medium and small sized; urban, suburban and rural in location.

This variation underlined the importance of an individualized advising approach to each student which recognized each person's unique strengths and weaknesses and developed strategies designed to reinforce the former and overcome the latter. Though we must write in generalizations it needs to be emphasized that no two individuals were alike or were advised in the same way.

Initial advising sessions emphasized study techniques and strategies. The students were having a great deal of difficulty scheduling their time and actually applying study skills principles to their academic work. Although many students had a reasonably good idea of what to do (in fact some had even completed study skills courses the past summer), they just were not doing it!!

* Appendix C

We also received substantial cooperation from the study study skills program of the Montana State University special services project (Advance By Choice). Too, students often had problems with specific classes and were helped to develop tactics to deal effectively with these difficulties. Most students at first did not recognize the need to vary their studying approaches to instruction in the courses they were taking and were assisted in understanding this.

At mid-quarter, the Montana State University Registrar publicizes a report each Fall quarter listing new freshmen who have "D" and "F" grades. At mid-quarter, forty-nine (49) STEPS TO SUCCESS students were on this list, 16 of whom had "D" or "F" grades in two (2) or three (3) classes. This caused us to intensify advising efforts directed to ensuring that STEPS students allocated adequate time for study and learned to use their time effectively.

The effectiveness of these efforts was documented by the Fall 1978 grades of the STEPS TO SUCCESS students. Of 99 freshmen in the program for whom predicted grade point averages at MSU were available, 74 had Fall 1978 grades exceeding their predicted grade point averages. Only four of our 117 STEPS students received academic suspension after Fall 1978 quarter.

At each of the advising sessions students were encouraged to talk about their work experiences and career interests. The latter frequently were quite specific even though the students were in an "undecided" program category. Nevertheless, students needed a great deal of help in working out processes to assist in the evolution of career interests to curriculum choices. They also needed to learn to cope with, accept, even prize the changes that took place in these interests. Impatient to resolve their "problem" of being "without a major" they had to be urged to take the time to think, explore, and test instead of making an impulsive choice. The Career Life Planning Workshops and the Career Resource Personnel Office were of substantial help in getting students to change from an event to a process mode in making out their career aspirations.

The on-going advising of STEPS TO SUCCESS students also encouraged students to be more open-minded and assertive in their career exploration efforts. In some instances, alterations to continued enrollment at MSU were considered. Partly in response to advising suggestions, at least seven women students had diversified interests in and talents for engineering fields.

In addition, students were often overlooking alternative paths of combinations of programs leading to their career goals. For example, one student was helped to realize that not all nurses are employed by hospitals; for her, public health nursing was the career choice. Another sought to combine agricultural engineering with computer science, a match of career interests she had not recognized previously. A third found photography gave him a chance to combine his talents with his passion for the outdoors.

Students were helped to recognize the value of an extra year's investment in order to attain their first choices in career goals. For example, six of the nine STEPS students now planning to continue in engineering majors initially did not have mathematics preparation adequate for this goal.

The importance of finding meaningful summer work experiences was also stressed. One student discovered that work as an apprentice electrician will enhance his computer science major. Another was employed by a surveying firm this summer prior to her entering the civil engineering curriculum. A third expected employment with a bank will add meaning to her accounting studies.

Students were also made aware of the opportunities provided by the National Student Exchange program. One, from a small town in Montana, enrolled for next year at the University of Maine, her first experience outside this state. Another, interested in a career in the travel industry, planned a business major at MSU by a year's exchange at a university with a program more closely related to her specific career goal (University of Hawaii).

However, not all students who identified their career paths remained at MSU. One sought the immediate employment offered by an

occupational program in a community college close to her home. A strong student, she was encouraged to keep open the option of eventual return to MSU. Two others, somewhat older than the typical freshmen, decided university life was not for them and returned to the "world of work". They also were urged to successfully complete their spring quarter programs, learning more about future options available to them. Others, living up to low predictions of academic success for them, were aided to look upon leaving MSU as a postive out, the end of a worthwhile one-year experience. One of these started a school for beauticians July 1st. Another sought employment with Mountain Bell. These students, who under other circumstances could have developed very negative feelings about their relationships with MSU, were helped to find value in their involvements with the university and the STEPS TO SUCCESS program. They were given a chance to explore career options, build some basic mathematics skills and discuss both educational and employment alternatives. They were assisted in strengthening their self-concepts, in finding ways to "feel good" about themselves. Success became theirs, even though it was not according to traditional university definitions.

Though the STEPS adviser emphasized his role to be academic and career guidance rather than personal counseling it was inevitable that students would share their personal problems with him. Students with more severe personal difficulties were asked to work with MSU counseling services but often immediate supportive listening and direct advice seemed to be a great deal of help. Problems students were having included relationships with parents, reactions to deaths of family or close school friends, homesickness, concern about being identified as a less able student (as they were in high school), and relationships with peers (especially roommates). The STEPS adviser is aware of at least 28 STEPS students for whom one or more of the above personal problems had serious impact. In his judgement, six of these individuals were in need of intensive therapy. Four of these six did accept professional counseling help. Undoubtedly these data are conservative. Not all students shared their problems with the

adviser and those who shared did not necessarily share all their problems. Also, the STEPS adviser makes no claims to be a psychologist; he did not "probe" in relationships with students, thus was likely to miss many "signals" of personal disturbance.

Students' problems in finding time to study were aggravated for a substantial number (18 of the 85 in the spring quarter program) by part-time work. In most instances the need for this work was due to the student "running out" of money before the end of the academic year. However, sometimes there seemed to be a strong preference for the work environment over the academic setting. One person (who withdrew from classes spring quarter) admitted to being in school in order to have her part-time job in the cafeteria rather than having her priorities in the expected reverse order. Some students also were spending substantial time in the more traditional co-curricular pursuits such as: fraternities and sororities; varsity, intramural and individual athletics; as well as various other forms of social behavior. Some would "go home" weekends thus missing classes at the end or beginning of the week. However, most learned to fit these involvements into a time schedule that allowed adequate time for academic responsibilities.

Illness, especially "flu" was abundant at MSU this academic year. It was not unusual for a student to be seriously ill for a two to three week period. At least two STEPS students became incapacitated by Mononucleosis.

Students frequently responded to pressures on their time for academic work by lowering their self-expectations. They would seek ways to "get by"! In some instances this would be by scheduling a lighter academic load; in others, by accepting lower grades. Rumors of "cheating" schemes were abundant.

Thus, STEPS TO SUCCESS staff found themselves dealing often with conflicts in values between those of the program, seeking each student becoming all of which he or she was capable, and the student, looking for ways to find time to do other things. For example, students would promise participation in career life planning, then not

show up. Even offers to conduct the workshop sessions on alternate evenings or a weekend did not overcome this avoidance. Too, student participation in mathematics help sessions was irregular. Some would wait until the "last minute" . . . then seek an intensive effort to help them accomplish several weeks' work in a few days. Others would just try a mathematics test one or more times to see if they could bulldoze their way through it. Only when this approach had clearly failed would they seek assistance. Still others did not put any effort into their part of the mathematics learning process, expecting the help sessions to do the entire job.

Students, through phone calls, advising sessions and formal letters were offered alternate means to meet program requirements. When they did not respond to these they were terminated from the program and its special services. Termination because of lack of effort in mathematics was not attempted though students who refused to enroll in at least one mathematics course also were not continued in the STEPS program.

Interestingly, sex-role stereotyping did not present immediately obvious barriers to students' choices of careers, academic programs or courses. Our students seemed very willing to consider non-traditional career choices. For example, two men gave serious thought to (but did not select) nursing majors. Six women planned careers in engineering or engineering technology fields and seven chose careers in business. One student had some difficulty with her mother when she mentioned thoughts about entering some traditionally male fields. However, she was helped to deal with the problem and it did not inhibit her career choices. In all other instances students reported their parents as supportive, even enthusiastic, about their crossing traditional barriers. Two women who chose engineering found their fathers, now in other professions, to have been educated as engineers and to be very excited about their daughters' "following in their footsteps".

The following table is the probable major field choices of the students in the spring 1979 program. Note that a substantial number

(12 of 55) women still are undecided about their major choices. This may be a consequence of their needing more time to sort among a wider range of options than had been considered previous to enrollment in the program. This is certainly true for some of the individuals in the group. It also is gratifying to note how small is the number (3 of 55) of women who intend to stop their postsecondary educational involvement.

Table 1. PROBABLE MAJOR FIELDS

Spring 1979

Fields	Men	Women	Total	Leaving MSU
Business majors	3	7	10	___
Engineering majors	4	5	9	___
Engineering technologies	2	1	3	1
Computer Science	1	___	1	___
Industrial Arts	1	___	1	___
Nursing	___	4	4	2
Dental Hygiene	___	1	1	1
Environmental Health	___	1	1	___
Health Education	1	___	1	___
Pre-Physical Therapy	___	2	2	___
Nutrition	___	1	1	___
Pre-Veterinary Medicine	___	1	1	___
Art	3	1	4	___
Film and TV	1	___	1	___
Architecture	___	1	1	___
Elementary Education	___	3	3	___
Recreation	___	1	1	___
Deaf Education	___	1	1	___
Child Development	___	1	1	___
Anthropology	___	1	1	___
History	1	1	2	1
Social Work	1	2	3	

PROBABLE MAJOR FIELDS (cont.)

Fields	Men	Women	Total	Leaving MSU
English	___	2	2	___
Botany	2	___	2	___
Physics	1	___	1	___
Beautician	___	1	1	___
Agricultural majors	2	2	4	___
Forestry	1	___	1	1
Still undecided	3	12	15	___
Full-time Employment	4	3	7	7
	30	55	85	13

The goal of three advising contacts with each student each quarter was realistic and, after initial student contact problems were overcome, reasonable to achieve. Data for guidance interviews with STEPS students follow:

Quarter	Total Contacts	Number of Students	Interviews per Student				
			1	2	3	4	5 or more
Fall 1979	378	117	1	13	77	19	7
Winter 1979	396	104	3	5	48	20	28
Spring 1979	324	85	0	4	36	25	20

A special evaluation form was developed to distribute to STEPS students after advising sessions. This form is designed to evaluate diverse purposes for and multiple levels of intereactions in the advising setting. We were especially interested in assessing the impact of the advising sessions on each student's attitudes. A copy of the form is in Exhibit 7* . Results obtained from this survey were very supportive of the advising process.

* Appendix C

Maintenance of participation by STEPS students in the full program was a continual problem illustrated by the following table:

Table 2. STEPS TO SUCCESS ENROLLMENT

	Men	Women	Total
Initial Interest in STEPS	55	91	146
Fall Program Enrollment	45	72	117
Winter Program Enrollment	39	65	104*
Spring Program Enrollment	30	55	85*
Completed All Program Requirements	22	47	69

*Includes two new enrollments each quarter

Table 3. STEPS TO SUCCESS 1978-1979

		Predicted Success at MSU	Actual Accomplishments Compared with Predictions		
			Minus	Similar	Plus
I.	69 students completing all program requirements	Low	0	6	19
		Moderate	4	6	15
		High	1	9	9
II.	16 students leaving program spring quarter	Low	0	2	6
		Moderate	0	2	4
		High	0	1	1
III.	21 students leaving program winter 1979-11 of 21 also left MSU	Low	2	5	3
		Moderate	2	3	4
		High	1	1	0
VI.	15 students leaving program fall 1978 (no data for one person)-13 of 15 also left MSU	Low	4	3	0
		Moderate	3	0	4
		High	0	0	0

There was little resistence by students to completion of the mathematics requirement. In fact, only one individual withdrew from the program because of an unwillingness to study college mathematics. However, it also was a goal of the project to urge students to accomplish more than the minimum, to successfully complete enough mathematics tc help keep their curriculum and career options open. For some individuals this meant completing mathematics through calculus; for all, at least through intermediate algebra a requirement of 57 MSU curriculums. STEPS students, especially those in the self-paced lower level mathematics courses needed to be encouraged, even pushed, to take full advantage of the mathematics resources available in the program. Daily, thoughtful effort by the student coupled with the encouragement, insight and other assistance from STEPS mathematics faculty not only could lead to success in mathematics but also could accomplish this success with far less time and energy than customary student trial and error efforts. The STEPS adviser and STEPS mathematics faculty spent a substantial amount of time establishing and maintaining close communications about accomplishments of students enrolled in mathematics courses. Joint attempts to get these students to pay greater attention to their mathematics assignments as well as to continue their mathematics education in subsequent quarters seemed to be of substantial benefit.

The STEPS adviser participated in all the dissemination activities of the project as well as substantial informal liaison with MSU faculty and staff. These interactions not only increased understanding and awareness of the project but they also were instrumental in alerting others to adjustments they might make to better serve students in their own programs.

Evaluation of Advising

A full time STEPS adviser was appointed to all of the STEPS students. This adviser worked very diligently with each of the students a minimum of three (3) times each quarter.

The following exhibit indicates the adviser's evaluation by STEPS students for Fall, Winter and Spring. In reviewing the results of the adviser evaluations it can be seen that the advising quality was excellent as perceived by the students. In almost every item which indicates positive advising effort the student rated the adviser very high and on almost every response which might indicate negative or poor advising the students evaluated the adviser low.

The advising effort was felt to be a major portion of the STEPS TO SUCCESS program and the evaluation of the advising program suggests it was extremely successful from the students' point of view. It is not known to what extent the advising itself augmented the STEPS students' behavior but it is believed to be one of the major components for the success of the STEPS students.

Exhibit 8 EVALUATION OF ADVISING

Please share your opinion of the advising services you have just obtained so we might strenghten our sources of advising help for you and other students. We would appreciate your honesty--no name is required. Thank you muchly!!

Please check one or more responses to each of the following:

1. What were your reasons for seeking advising help?

31.3 a. needed to plan my academic schedule
11.06 b. needed to change my academic schedule
11.00 c. had problems with my coursework
3.7 d. had personal problems
9.6 e. just wanted to talk
62.26 f. adviser asked me to stop by
10.9 g. had a specific question

2. The adviser's reaction to me:

94.9 a. pleasant
5.06 b. common
.33 c. unpleasant

3. During the advising sessions the adviser:

65.4 a. listened to my concerns with understanding
55.4 b. seemed really interested in me
.5 c. was difficult to understand
.96 d. rushed me
2.3 e. took more time than I wanted to spend
45.23 f. was able to see my problems and needs
.33 g. ignored what I was saying

4. When I needed specific information and/or opinions the adviser:

52.56 a. was well informed
35.2 b. if he didn't know, found out what I wanted to learn
0.0 c. sent me away
1.33 d. gave me poor information
28.6 e. was able to comprehend what I was asking
.7 f. did not respond to what I asked
42.03 g. provided the help I needed

5. Specific suggestions the adviser gave me were:

72.63 a. clearly stated
24.43 b. not difficult to carry out
2.83 c. confusing
2.53 d. difficult to accomplish
42.9 e. related to my needs
.96 f. not important to me
30.36 g. meaningful to me

6. Because of the advising help I have received at MSU I now:

37.63 a. think more of myself
2.16 b. think less of myself
32.9 c. look at things differently
43.9 d. have a better idea of where I am going
13.36 e. am confused
25.7 f. know a lot more than I used to
0.0 g. have changed very little

7. In comparison with other advising I have received (high school or college) this advising was: (please check only one response)

57.06 a. much better
30.06 b. better
10.7 c. about the same
1.63 d. worse
.5 e. much worse

8. If I were to grade the advising services I have just obtained at MSU, the grade awarded would be: (please check only one response)

65.0 a. A
31.63 b. B
1.16 c. C
0.0 d. D
0.0 f. F

9. Please feel free to add any other comments:

_____

_____

_____

_____

_____

ADVISING COMMENTS

1. Jim helped me alot, so I feel that Jim can save me time if I need to see him.
2. Jim Dolliver is a great counselor! He wants to help and tries to encourage me to be more productive. I thank him very much.
3. I feel this is a really good program and it's nice to know I have a place to go to for help.
4. The advice I have received has helped me out quite a bit. I tell other students that need help about it.
5. I wasn't pushed or forced into anything. I will definitely come back if I have problems or need some help.
6. I feel as though this service will help alot because it's more personal. The advisor takes time to look at what I need.
7. The people who have been helping me, made me feel better towards myself and my problems.
8. I have received excellent guidance and counseling ever since I've been in attendance at MSU. I sincerely appreciate the genuine interest that everyone seems to have with my academics and personal needs. I'm very grateful for the entire General Studies program, I would really be messed up if it weren't in existence. I have never been given the attention I've received here in high school. I figured no one really would care or be willing to help at college but I know better now. The few weeks counseling I have received is far superior than all three years of advising I received at high school. Thank you for such a wonderful department.
9. Every time I see my advisor it seems to help a little bit more.
10. Jim Dolliver is a very helpful advisor. I do not hesitate when I need help. Very understanding.
11. I have only seen an advisor once, probably get a better grade next time.
12. I really feel free to ask about anything that might help me. I am relaxed when I speak with my advisor.
13. He quickly learned what the problem was; classified it, and knew what I should do, even though I never said there was a problem.
14. Appreciate the help.
15. Pleasant, easy to get along with and understandable.
16. Jim Dolliver really related to me in straight forward manner, no beating around the bush language. I really appreciate that!

17. I didn't like the way he suggested (in a round-about way) that my ability in math limited me from going into Engineering. I didn't see why I couldn't start at Algebra and work my way up to Cal-Anal. geometry. If I'm wrong he sure didn't explain why this couldn't be done. He just made it seem that it was too far off of a goal for me to reach. Which is a bunch of crap, since they all or you seem to push on us around here is to set your goals and "go for it". Everyone gives you an encouraging word until it's laid on the line, and then tell you it won't work out because of your past experience or present ability in math.

18. I am just getting started in this program and the advisor seems understanding and concerned, or he wouldn't of kept contacting me. This is good and impressive. I am looking forward to this program.

19. The advising was about the same because I had an outstanding advisor in high school.

20. I knew where I was headed so this didn't really help much except to add some other insights.

21. It's nice to know there is someone to talk to when having trouble.

22. I sincerely appreciate the guidance and assistance that has been offered me. Everyone I have been in contact with has treated me with warmth and genuine interest. I'd really be lost without this help!

23. I really appreciate the help and am less scared by being able to depend on someone who understands my needs and can give me the proper courses to fill that need.

24. The advisor seemed to know my needs and knew what kind of a push I needed. I really appreciate the help. It will start me to thinking.

25. I felt that some of the questions on the questionnaire were too personal and didn't answer these.

26. The advisors are very understanding and helpful. I do feel a bit uncomfortable when discussing my problems, but I guess that's the way I am. The STEPS and General Studies advisors I have met do an excellent job, though.

27. I was really scared to talk about one particular subject, but was really glad to find the help I needed and felt much better when I left. Thanks!

28. Pleasant, nice, concerned. He made me feel like I was real important.

29. It's a fine program, and my advisor is an excellent person with a broad knowledge of what he's doing, what I'm doing, and what I could be doing to make it better yet. Besides that, he's got an interesting personality, which helps in any situation.

30. The advising I received has really impressed me. I have really been helped. The advisor takes an interest in my need and helps me out in many ways.

31. I feel that this meeting was very helpful to me!

32. Dr. Dolliver should be commended in my opinion, for not only does he leave me with all of the above checked, but a talk with him about whatever invariably leaves me enlightened and positively charged.

33. I couldn't ask for an advisor that was more understanding. He's great.

34. So far, advising sessions have been very helpful and pleasant.

35. General Studies has been a great help to me this year.

36. Very helpful, gave me some confidence.

37. I feel that Dr. Dolliver is one of the better couselors on this campus.

38. I really got a lot out of the program this year and hope that you can continue it for the incoming "lost" freshmen!

39. Great cross reference from advisor in one department to another.

40. I appreciate the help!

41. I always feel as if I've accomplished something when I leave.

42. My only complaint is he seems to think less than I do of how much I can (or should) handle.

43. I'm glad I went to him, I feel much better. He seems as though he really cares.

44. I like the support that is given to me, because right now that is what I need.

45. I am particularly glad I have this counseling to help me this school year.

46. I always feel more encouraged after a counseling session.

47. You have helped me alot.

48. I like this advising set-up, helps very much.

49. No further comments at this time, except I keep filling out the same forms.

50. I feel I'm on the right track!

51. Jim helped me alot, telling what I should do for this quarter, plus showing him my Spring quarter classes, and we both like what I'm doing for next quarter.

52. It isn't the counselors fault, it was me not willing or able to explain my situation.

53. I have been extremely well treated by the General Studies office and have nothing but praise for Jim Dolliver, Marlene Folsom, and Ms. Wessel. I hope they can continue to provide the same fine service and help.

54. I found the advisors are really interested in me and want to help.

55. I felt a little pressure as far as what fields and classes I should take; I am still confused.

56. He is always willing to help and he is a good friend and is really concerned with what I am striving to acheive.

57. I needed help on my schedule and advice. He gave 100% of both. Jim's a good dude.

58. The counseling I have received so far has been in good taste,in addition, it's giving me a better idea of where I am going. If more students were to receive counseling from such understanding individuals, a lot more problems could be solved.

59. Advising sessions are worth my time. Good job!

60. Dr. Dolliver is a terrific person. He is always interested in what's going on in my life. He is always seeking to be updated on new developments that occur with me.

61. Jim was a big help today. I appreciate the understanding and advise.

62. This seems to be the only place I can get some self-assurance and some encouragement.

63. My thanks to Mr. Dolliver for understanding and helping me when I needed alot of extra help.

64. Jim seemed like a really nice guy. He told me more what I should do about my time and make a schedule sheet to see how I'm doing.

Recommendations to Strengthen the Advising Component

1. In the recruiting process definite understandings must be established between students and the program. It would be useful if these understandings were in the form of a written contract. The contract could spell out the student's academic and career goals, the services the program would provide to help in the accomplishment of these goals and the obligations for participation by the student. Progress toward these goals could be given quantitative ratings and be an important component in the evaluation of the project.

2. Initial interactions between the program and students who have contracted for its services must take place within the first two weeks of the fall quarter. Enrollment of all program students in an orientation/guidance/career exploration course seems the most logical means to accomplish this. Traditional ways to contact students (letters, phone calls, printed announcements) can be used also, but only as a supplement.

3. Registration in an appropriate mathematics class must be undertaken by each student in the project in their initial (fall) quarter enrollment. This provides more options, not only if the student is successful in mathematics but also if he or she has difficulty with this subject area. Self-scored placement examinations can be of much importance in helping the student and the adviser agree on the correct selection for the student's first college mathematics experience.

4. Study strategies and skills need to be emphasized early in the program. Special attention should be given at first to time allocation techniques. Inventories of each person's attitudes and current skill levels related to studying can be helpful and are worthwhile if they are self-scored. However, these (or formal presentations) are no substitute for direct guidance interactions. The target format is excellent with sessions presented during the year at about the time the students can be expected to be concerned with the session subject.

5. Psychological services back-up for advising efforts would be most helpful, in fact may be essential if the full benefits of these efforts are to be realized. Even with experienced advisers, in-service education and training, perhaps by conducting critiques of specific cases, are very important. Also, a capability for immediate referral to qualified psychological staff can do much to mitigate the impact of students' problems on their long range adjustments to educational settings.

6. Extensive advising records are well worth the time required to develop and maintain them. The records provide a means to give continuity and time perspective to each student's academic and personal progress. A record keeping format is helpful but should inhibit neither the informality of the adviser/advisee relationship nor the range of information obtained about the student. All such records should be destroyed when the student leaves the project.

7. Three guidance sessions per student per quarter are a realistic goal but this could be reduced to two if students were enrolled in the orientation/guidance/career exploration course.

8. Students will make substantial use of advising information and resources if these are readily available to them. Often a student would leave a STEPS advising session with several items related to his or her interests. STEPS students also responded well to suggestions to use the Career Resource Personnel Office as well as other sources of career guidance.

9. Sex-role stereotyping influences on student career choices tend to be subtle and indirect. Advisers need to be especially alert for modest alterations in students' academic plans and ascertain the reasons for them. In some instances these changes will be the consequence of thoughtful choice and merit encouragement. In others, they may reflect an erosion of confidence that careful guidance might help offset.

10. Advisers must have enough knowledge of "the system" to help resolve routine student problems. For a new staff member in a specific project, no matter how experienced he or she may be in other

settings, this is best (and perhaps only) obtained by working in close association with regular staff. If students' routine advising needs are not well met they will seek to obtain all guidance needs elsewhere.

Academic Achievement of STEPS TO SUCCESS Students

For residents of this state, Montana State University is an open admissions university. The population of STEPS TO SUCCESS students reflected this admissions policy with approximately 1/3 of the enrollees in the program having predicted first year grade point averages at MSU of less than 2.0. (Predicted first year grade point averages for entering freshmen and undergraduate transfer students are published each September by the MSU Testing and Counseling Service. These predictions are based on previous academic achievement and aptitude scores.)

As the data in the following table demonstrates, STEPS TO SUCCESS students enrolled in the program during the spring 1979 quarter earned cumulative grade point averages substantially better than predicted for them. Of the entire group only 8 persons had less than 2.00 cumulative GPA's; this had been predicted for 6 of these individuals. Only 5 persons, all for whom first year GPA's from 2.0 to 2.5 had been predicted had actual first year GPA's less than their predictions. More than half of the STEPS students (45 of 85) had first year GPA's at least 0.5 of a grade point higher than predicted for them. One-third of those for whom GPA's less than 2.0 were predicted, 2/3 of those for whom GPA's of 2.0 to 2.5 were predicted and all with predictions greater than 2.5 had first year GPA's higher than 2.5. Obviously, most STEPS TO SUCCESS students became successful in their MSU studies.

Table 4. SPRING 1979 STEPS STUDENTS

MSU CUMULATIVE GRADE POINT AVERAGES FOR 1978-79

Actual	Predicted		
	< 2.0	2.0 - 2.5	> 2.5
< 2.0	6	2	—
2.0-2.5	12	8	—
> 2.5	9	20	18
W	1	—	—
I	1	—	—
	29	30	18

Actual Minus Predicted			
+1.0 or >	7	7	—
+0.5 to +0.9	12	9	10
+0.1 to +0.4	8	5	5
Same (± 0.05)	—	4	3
-0.1 to -0.4	—	4	—
-0.5 to -0.9	—	1	—
-1.0 or >	—	—	—
W	1	—	—
I	1	—	—
	29	30	18

Mathematics for STEPS TO SUCCESS Students

Work in mathematics for students in the STEPS TO SUCCESS program has involved personal assistance at all levels of instruction, special "class" sessions prior to final examiniations, seminars designed to increase abilities of students to succeed in mathematics courses, personal attention to aid students in overcoming difficulties in registration procedures for mathematics courses and helping students to understand what was required from them by their courses.

The Mathematics component of STEPS TO SUCCESS had impact on MSU well beyond its many services to students in the program. Because of dissatisfaction with the present way of teaching Algebra I, the MSU Mathematics Department had decided to shift instruction in elementary and intermediate algebra from the traditional classroom to a self-paced mode. Student-oriented inputs from STEPS TO SUCCESS staff provided basis for modifications to plans of the Mathematics Department that substantially strengthened their total instructional effort. Often STEPS TO SUCCESS staff, because of their frequent close contact with students, were the initial sources of information about problems students were having and the most knowledgeable source of appropriate corrective action.

The purpose of the Mathematics component of the STEPS Program was to help <u>all</u> of the students in STEPS in their mathematics and mathematics-related courses. In particular, it was our goal to get every STEPS student through at least Math 100 (intermediate algebra).

In order for a student to successfully complete a college mathematics course the following are essential:

1. The student must be pre-tested to determine placement in the proper course for which the student has adequate background; and the student must be encouraged to start at that level.
2. She/he should develop good attitudes towards mathematics and build good attitudes about their mathematics performance.

3. Good study habits must be learned and applied to their mathematics and science courses.
4. She/he should receive continual math lab tutoring which will help the student use study time to advantage.
5. Each student should receive personal guidance attention when she/he is not satisfying the requirements of the academic program or when the student feels the need for individual attention and counseling.

STEPS students enrolled in the following mathematics courses at Montana State University: Math 001 (arithmetic), Math 001 (elementary algebra), Math 100 (intermediate algebra), Math 115 (trigonometry), Math 117 (calculus for non-science majors), and Math 121, 122, and 123 (calculus). Math 001 and Math 100 were conducted on a self-study basis with a math lab operating 8-5 daily providing individual help to undergraduates from faculty and graduate students. A testing center administered all pre-tests, unit exams and final exams in the Math 001 and Math 100 courses. The other courses were taught on a regular lecture basis.

Math 001 (arithmetic and/or first year high school algebra) carried five units course load credit but was considered a sub-college level course and provided no credit towards graduation. The student could register for Math 001 for at most three quarters and was graded on a Pass/No Record basis. No grade was given in this course until the student had completed all of the algebra portion of the course. The text was ARITHMETIC: A Modern Approach by Keedy-Bittinger and/or Introductory Algebra.

Math 100 used INTERMEDIATE ALGEBRA: A Modern Approach by Keedy-Bittinger and the student received five units college credit for this course. Chapters one through eight were covered each quarter and parts of chapter 8 were included if time allowed. Letter grades were earned in this class but since the student must pass each chapter at the 70% level before proceeding to the next chapter, the grades in this course were A, B, C, or F.

Math 115 used Essentials of Trigonometry by Drooyan (Macmillan). Math 117 used Elementary Calculus for Business, Economics and Social Sciences by Anderson (Houghton-Mifflin) and the Math 121,122, 123 sequence used Calculus and Analytic Geometry by Riddle (Wadsworth).

The mathematics component conducted a STEPS Math Lab daily, (Monday through Friday) from 12-3 PM. This lab was only open to STEPS students. Nevertheless, it only was consistently used by STEPS students in the Math 001 and 100 classes.

During Fall and Winter quarters, in addition to the STEPS Math Lab, the STEPS Math Director held two fifty minute sessions a week for students to introduce them to assertiveness training, relaxation, anxiety control, building study skills, sex-role stereotyping, building a good self-image and building a positive attitude towards mathematics. The students who attended these sessions found them of value. However, it was very difficult to maintain student attendance probably because these were non-credit hours that the student had to spend each week. As midterm exams approached, the attendance went down each quarter. These two-hour sessions per week continued for two quarters.

During the STEPS lab, the mathematics component director attempted to individually help students when ever she saw a specific need. In particular, most of these students had not succeeded in previous mathematics courses and they need to be reassured they were succeeding as they tended to remember only their failures. It is interesting to note that the students in the calculus course tended to regard as failure any achievement below the "A" level. Fall quarter one of the calculus students came to the mathematics component director and wanted to drop calculus. She thought that she was doing poorly in the course. The mathematics component director went to her instructor to get the names of two females in her class who were doing good work so that these two students could provide support in the classroom. The mathematics instructor replied that the STEPS student was one of the best students in the class.

In general, students at levels above Math 100 had fairly good study habits, while many of the students at the Math 100 level and most

of the students at the Math 001 level had very poor study habits. They did not know where, when or how to study. Many of these students seemed to need a "parent" telling them what they should be doing and watching to see that they kept working. Indeed, attempting to motivate such students was very time consuming. The mathematics component director had to keep daily track of student progress and personally call each student when they began to get behind. This entailed substantial record keeping and time spent trying to contact students. However, contact is important if we want students to complete the Math 001 course.

It was unfortunate that most of the STEPS students at/or above the Math 100 level used the STEPS lab only after they had flunked a test or after many hours of unsuccessful work on a particular section. Ideally, students should have not spent more than ten minutes on a particular problem or concept if they were unable to understand what was happening. Some students spent hours working and achieving little or nothing. These same students would then stop working on their mathematics course because it caused so much frustration.

Fall quarter, the Testing Center was still not completely organized and it was extremely difficult to assess student progress, even once a week. Winter quarter, the Testing Center began computer grading of all exams and it became an exceptionally smooth running operation. Student test results were available the day after a student took a test and it took about 20 minutes a day to update the STEPS students' records.

The meeting place for the STEPS lab was a problem. During both Fall and Winter quarters the lab was in a room used periodically by other departments as a meeting room. Although the STEPS lab was scheduled in the same room 12-3 daily, these people invariably let us know that we were intruding on their domain.

Students in STEPS TO SUCCESS were required to take at least one college mathematics course. The goal of the project was to have each STEPS student complete mathematics through Mathematics 100, the MSU intermediate algebra course. This was to permit students the career

choices that require this level of mathematics preparation. At MSU fifty-seven different curriculum options or academic majors require Mathematics 100 as a prerequisite course or include this subject as a freshmen requirement.

STEPS Mathematics Results

Of the 85 STEPS students enrolled the Spring 1979 quarter, 77 (91%) completed at least one mathematics course. Sixty-three (74%) completed at least an intermediate algebra course. The percentage for completion was somewhat higher for women in STEPS (93% completing at least one math course, 76% completing at least intermediate algebra) than for men (87%; 70%).

Eleven (37% of the men in STEPS and 32 (57%) of the women completed more than one mathematics course during the 1978-79 academic year. Four (13%) men and eight (15%) women completed three mathematics courses. Four (13%) of the men and 15 (27%) of the women completed at least one calculus course with one man and four women completing the full first year calculus and analytic geometry sequence.

26 student affiliated with STEPS TO SUCCESS started their MSU mathematics at the 001 Arithmetic level. Another 26 started MSU mathematics at the 001 Algebra level. The following tables compare the completion rate for the course by STEPS students with the completion rate for a control group comprised of General Studies students not in the STEPS program. In both instances the differences were statistically significant at the 0.01 probability level.

Table 5
Students Starting Mathematics at the Arithmetic Level

	Elementary Algebra	Did not Complete Elementary Algebra
STEPS TO SUCCESS	13 (50%)	13 (50%)
Control Group	6 (16%)	31 (84%)

Table 6
Students Starting Mathematics at the Elementary Algebra Level

	Completed Elementary Algebra	Did not Complete Elementary Algebra
STEPS TO SUCCESS	26 (96%)	1 (4%)
Control Group	38 (58%)	28 (42%)

Two of the 26 STEPS students who started Mathematics 001 at the arithmetic level successfully completed additional courses in intermediate algebra (one, course 100 for 5 credits; another, course 101 for 3 credits). This may be compared with the one person in the control group who successfully completed course 101 for 3 credits.

18 of the 26 STEPS students starting Mathematics 001 at the algebra level not only completed that course but also successfully completed one or more additional mathematics courses during the 1978-79 academic year. This may be compared with the control group in the following table:

Table 7
Students Starting Mathematics 001-Additional Mathematics Courses Completed

	101	100	115*	117*
STEPS-arithmetic (26)	1(4%)	1(4%)	____	____
STEPS-algebra (26)	3(12%)	12(45%)	1(4%)	2(8%)
Control Group-arithmetic (37)	1(3%)	___	____	____
Control Group-algebra (66)	2(3%)	18(27%)	1(2%)	____

*100 also completed as prerequisite course

Of the 20 STEPS students who completed subsequent mathematics courses 13 were women and 7 were men. For the 22 students in the control group who completed additional mathematics courses this ratio was reversed, 6 women and 16 men. This was 41% of the STEPS women in Mathematics 001 and 35% of the men in contrast with 13% of the control group women and 29% of the men.

35 of the STEPS students started mathmatics at MSU either Fall or Winter quarter with Mathematics 100, an intermediate algebra course. The grade point average for these students in Mathematics 100 was 2.97. For a control group of 214 General Studies students also starting in Mathematics 100 the course grade point average was 2.46. This difference had statistical significance at the 5 percent level. Sixteen (46%) of these STEPS students completed MSU mathematics courses subsequent to Mathematics 100 compared to 62 (29%) of the control group.

Table 8
Students Starting Mathematics 100--Subsequent Courses Completed

	100*	101*	115	117**	121***
STEPS Students (35)	____	____	8(23%)	4(11%)	4(11%)
Control Group (214)	5(2%)	2(1%)	20(9%)	31(14%)	4(2%)

* repeats of initial Mathematics 100 enrollment

** one STEPS student and 12 in the control group also completed Mathematics 115

*** Mathematics 115 (or equivalent preparation) is a pre-requisite for this course

Twelve of the STEPS students taking additional mathematics after course 100 were women, four were men. In the control group 41 were men and 21 were women. This is 57% of the STEPS women starting Mathematics 100 and 29% of the STEPS men in contrast with 24% of the control group women and 34% of the control group men.

Several factors may have contributed to both the higher completion rates and greater interest in continuation of mathematics by STEPS TO SUCCESS students, especially the women in the program.

1. The individual employed as mathematics staff by the program is well-educated, skilled at diagnosis of mathematics learning problems and willing to spend whatever time it takes to help students achieve mathematics success. She also was a very positive role model for women in the program and was most willing to share with them her experiences as a woman in a quantitative academic area.

2. The STEPS adviser actively encouraged completion and continuation of mathematics courses as a means of increasing individual students' career options.

3. Working in concert the mathematics staff member and the adviser maintained aggressive contact with students in the program trying to make sure no one "gave up" in their efforts to succeed in mathematics. A great deal of time was spent with some students to help them overcome anxiety about learning mathematics and to recognize the value of knowing mathematics in their overall educational programs.

4. Students finding academic success in mathematics, a first time experience for many, were pleased to continue that success through other mathematics courses.

5. The ability and willingness of the mathematics staff member to work informally with STEPS students, starting at and building from whatever achievement level was appropriate for each individual did much to make STEPS students comfortable with the self paced instructional mode used for the arithmetic and algebra sequences.

Mathematics Component: Evaluation

Several analysis were performed with regards to the math program participated in by the STEPS students. The STEPS students were given extensive personalized tutoring, whereas the non-STEPS students were provided with a similar course without the degree of individualized and personalized attention. We will identify the math courses as arithmetic, the beginning algebra course as Math 001 and the intermediate algebra course as Math 100.

Two basic analyses were completed. The first analysis compared grade point averages of STEPS students versus grade point averages of non-STEPS students participating in each of the three level courses. The second analysis that was performed considered the percentage of students which started the process (arithmetic) and continued on successfully to do higher level courses, for example, from arithmetic to Math 001 to Math 100 for both the STEPS and the non-STEPS students.

With regards to the first analysis (comparing grade point averages of STEPS students with non-STEPS students participating in the arithmetic level course) we find that the STEPS students' GPA was significantly better than the non-STEPS students' GPA at both the .01 and .05 level of significance. It is believed that this was due to the amount of individualized attention which was given to the STEPS students as well as the effect of the other STEPS program components. With regards to Math 001 we find that the GPA of STEPS students was higher than the GPA of non-STEPS students at the .05 level of significance. With Math 100 the STEPS students GPA's are again significantly better than the non-STEPS students GPA's at the .05 level of significance. The Math GPA analysis was performed using a t test comparison means technique for non-paired data.

The second analysis compared the relative number of students who completed various aspects of various courses in STEPS relative to those that were not in STEPS. Results indicate that a significantly larger number of STEPS students who began their studies of mathematics at the arithmetic level completed Math 001 when compared to other

General Studies students who were not in STEPS at the .01 level of significance. It was also found that a significant larger number of STEPS students who began their study of mathematics at the Math 001 level completed Math 001 when compared to General Studies students who were not in STEPS at the .01 level of significance. In addition, STEPS students who began their studies of mathematics at the Math 100 level received significantly higher grades when compared to other General Studies students who were not in STEPS at the .05 level of significance.

It is of further interest to note that with both Math 001 and Math 100 STEPS students received better grades than non-STEPS students and that they completed the next segment of mathematics at a higher rate than those students who were not in the STEPS project. It can be concluded, therefore, that the Math component greatly improved not only the completion rate but the overall grade attainment in specific math programs at both the 001 and 100 levels.

Recommendations to Strengthen the Mathematics Component

1. The entire staff of the program needs to meet for a period of time before the Autumn Quarter begins to get the program coordinated.

   a. Ideally, the Director of the STEPS Math Program should participate in the training session for facilitators of the Career Life Planning aspect of the program during Autumn Quarter. The Director is in a position to encourage students to participate in the program and also, being in day-to-day contact with the students would have been able to point out to the students when they could apply what they had learned in the Career Life Planning program.

   b. It is essential that the Math Lab be physically located close to other aspects of the mathematics program. At Montana State University it was extremely important that the STEPS Math Lab instructor be able to accompany students to the testing center and to see the director who was in charge of the testing center. All three quarters the Math Director encountered lack of interest and resistance from the administration when searching for adequate housing for the Math STEPS Lab. The Math STEPS Lab appeared to have lowest priority for room assignment and adequate facilities were obtained Spring Quarter only after unoccupied rooms were found by the Director. It was extremely difficult to conduct a math lab in a storage room, which is where the Math STEPS Lab was located Winter Quarter.

   c. The Math Lab instructor must have a list of all STEPS participants which includes information on local telephone number and the mathematics class in which the student is currently registered. Since the Registrar's Office at Montana State University does not provide class lists until after the fifth week of classes, it is essential that class lists be developed as early as possible. Most of the

students in the STEPS program were taking courses using the PSI method where there is no classroom lectures and hence no daily contact with students. Without adequate class lists it is impossible to get all of the students working on their courses quickly. Hence, the Math Lab instructor must have the class lists the first week of classes.

d. The success of the Math Component of the STEPS program depends on having a counseling staff who will advise students into the proper mathematics course and who will encourage students to register for subsequent courses. The STEPS adviser did an exceptional job encouraging the students to continue taking mathematics courses. Ideally, the STEPS adviser, the Math STEPS Lab instructor, and the Math STEPS Lab should be housed in the same building. Top priority needs to be given to a good working relationship between the advising component and the Math Lab component of the program.

e. I suggest a student-staff social at the beginning of the Autumn Quarter where students and staff will become informally acquainted. It is essential for a good math lab to have a friendly and comfortable atmosphere. What would take many weeks to develop in the math lab itself can be accomplished in one evening at an informal gathering.

2. The Math STEPS Labs need to be more structured than they were in the 1978-79 project. Students need to be divided into at least three separate labs: Math 001 (including arithmetic and algebra), Math 100, and Trigonometry-Calculus. Students become more assertive as they take courses at higher levels and the assertive student receives most of the attention in a math lab. I would also recommend required daily attendance at the Math STEPS Lab for students registered in PSI courses. Required daily attendance at the Math STEPS Lab would solve many of the problems we encountered this past school year.

a. Required daily attendance will force the student to review material they do not know soon after taking a test. The instructor will also be immediately aware that a student has stopped working on her (his) math course. A great deal of my time this past year was spent getting students who had stopped work started working again and caught up for the time that they missed because they had not passed a test.

b. The student will develop better study habits. Most of these students do not believe, or possibly realize, that it is important to study their mathematics course for two or three hours daily rather than trying to learn all of the material over a week-end every three weeks. Once they see that they are successful when they put in daily, concerted effort, they will at least know that this is the proper way to study.

c. The students will feel less frustration since they will be able to ask about material in the text that they do not understand. Many students stop working on their mathematics course because they have spent considerable time on a homework assignment and were unable to progress. Without this unnecessary frustration the student is encouraged to complete the course.

d. The student will be encouraged to learn all of the material in the course rather than just the material that is necessary to pass the test. Frustrating to me was the student who would take a chapter test before studying the text and then learn only the material they remembered was on the test. These students will eventually be unable to continue in mathematics at a higher level because they lack many basic skills but it is very difficult to make such a student realize that they are causing themselves to fail at a later time. It is easy to spot such a student who works consistently in a math lab and is also

easy to continually point out the pitfalls of their behavior.

e. The students will begin to enjoy working on their mathematics since they will develop friends in the lab and will be working together with others on their mathematics assignments. This is extremely important particularly for female students since studies have shown that they tend to isolate themselves in an ordinary classroom situation which encourages dropping out of mathematics courses.

f. The students who will not commit time to their mathematics class will be dropped from the STEPS program; the inordinate amount of time we spent on these students this past year can be spent helping the student who is willing to make the effort to help themselves. We become the enemy of the student who refuses to commit time to studying since we are continually pressuring them to do what they do not want to do and making them feel guilty that they are not studying.

g. It is easy to spot consistent errors a student makes if they attend a daily lab. Often mistakes are due to lack of adequate background and the student is unable to determine why she (he) is having difficulty.

h. Students at the Math 001 level are extremely sensitive to lack of peer respect for the level at which they are achieving in mathematics. Having a lab for Math 001 students will relieve this frustration during the time they are studying their mathematics course. It will also allow them to meet many other students who are working at the same level and will provide them with a study group. Thus, it is critical that the person directing this lab believe that these students are worthy college students and are functioning at this level mainly because of inadequate preparation.

3. The students working at the Math 001 and Math 100 level should have a testing situation where no time limit is placed on any examination. Spring Quarter the Mathematics Department decided that the chapter tests would have a time limit of 50 minutes. Many students found this time to be inadequate especially during the last three or four chapters in the books. One of the major features of the PSI method of instruction was to eliminate testing fear by removing frustration due to lack of time to finish a test. Especially for students who verbalize math anxiety, timed tests is one of their major fears of mathematics. Most of these students, when given five or ten minutes longer to work on a test, will leave the testing room without the frustration, anger and resentment they feel when they are unable to complete the last questions on the test or are unable to check their answers. The student who feels she (he) would have recieved a grade point higher if she (he) had only had a few minutes more to check the work is not going to enjoy the mathematics course and will feel that the mathematics department is the enemy of the student. This antipathy towards the mathematics department encourages student cheating, lowered achievement, and a general bad name for the entire program.

4. There is a real need for further secretarial help. Daily there is a need for someone to transfer testing results from the computer lists to useable form. One of the reasons the STEPS program was successful this year was that students were called and encouraged to get to work when they were behind the schedule. Calling students takes a great deal of time and it is a waste of the talents of the mathematics instructor to do this calling. The person who calls the student should be one person, a person who the STEPS students know, a person who knows the progress of individual students and is able to answer questions over the phone and, most important, a person who the STEPS students trust with their personal information.

Career Resource Personnel Office

The Career Resource Personnel Office was established the second week of February, Winter Quarter, 1979. It's purpose was to offer students a place to discover what being a "engineer", "nurse", "teacher", or whatever was really like. The office facilitated students discovering practical, on-the-spot rewards, problems, tasks and concomitant life styles, etc.,that people face in their prospective careers. The office contained a list of more than 1,100 Alumni and non-Alumni volunteers in more than 125 occupations; these people had agreed to assist students in clarifying career choices by one or more of the following:

A. Corresponding with a student.
B. Talking with a student on the phone.
C. Talking with a student at the volunteer's place of work.
D. Having a student spend a day with her/him ("job shadowing").

The Career Resource Personnel Office was open 5 days a week from 9-12 noon to assist students in selecting a personal resource, listing questions they wished to ask in an interview, clarifying issues and career choices and setting appointment dates. By June 6th (finals week), seventy-eight students had utilized the office, contacting some eighty-two resource people. An additional twenty-two students contacted more than one resource and twenty of the resources were used more than once.

A special effort was made Spring Quarter to publicize the office throughout the campus. Twenty-one departments and groups were contacted and given 15-20 minute presentations with question and answer opportunities by the Career Resource Personnel Office Staff. The departments and groups who received presentations were:

1. College of Nursing
2. Department of Business Financing
3. Department of Business Accounting
4. Department of Business Marketing and Management
5. Department of Secondary Education
6. Department of Elementary Education
7. Department of Mechanical Engineering
8. Department of Chemical Engineering
9. Women's Athletics
10. Department of Electrical Engineering

11. Department of Agricultural Engineering
12. Department of Microbiology
13. Department of Biology
14. Department of Physical Education
15. Department of Earth Sciences
16. Department of English
17. Department of Sociology
18. Student Housing-R.A.'s
19. College of Art
20. Career Administration Class (Graduate Students)
21. Panhellenic (sorority meeting)

Departments and groups contacted that did not respond to our request to make presentations were:

1. Department of Mathematics
2. College of Architecture
3. Department of Home Economics
4. Department of Psychology
6. Department of Physics
7. Fraternities

In order to evaluate the effectiveness of this office and it's usefulness to the students, student evaluation cards were tabulated. (Percentages are rounded to the nearest tenth and based on a total of seventy-eight students). They indicated that:

1. 63% women and 37% men used the office.
2. 61% of all students using the office were 19-20 years old.
3. 63% of all students using the office were classified as freshmen.
4. 45% of the students using the service found out about it via posters, flyers and advertisements.
5. 95% of the students visited the office 2-3 times.
6. 98% of the students rated the service and satisfaction offered to them as excellent.
7. 99% indicated they felt at ease, were listened to and had their personal opinions respected while visiting in the office.
8. 96% said they would return to the office for more assistance if it was needed.

In addition, in order to monitor the flow of students and the Alumni and the non-Alumni volunteer contacts, a telephone survey was conducted of all resources used at the end of the academic year of 1979. The attitudes and reflections of these people was overwhelmingly positive. They indicated that:

1. 99% felt the service was a good experience for the students.
2. 92% felt the students were prepared for the interviews.
3. 92% said the student contact was a good experience for them.

4. 99% said they would continue to be a resource in the future.
5. 99% said they would continue to recommend this service for students in the future.
6. 50% of all the contacts were at their place of work.
7. 33% of the contacts were via phone interviews.
8. 17% of the contacts were via "job shadowing".

In addition to the above, the resources frequently stated that they "enjoyed" the student contacts and were happy to see the University offering a "link" to the students that enables both alumni and students to have an opportunity for realistic and viable communication.

Recommendations

It is our hope that some of the suggestions below can be carried out in the future. The recommendations are as follows:

1. Continue the phone survey follow-up. Maintain contact with the resources via thank you letters and newsletters regarding "what's happening" with the service and students.
2. Continue an effort to work with and add more people to the the resource list locally. Work with the Chamber of Commerce.
3. Continue to keep faculty and departments informed of what services are available to the students. In addition, some departments, i.e. Nursing, Engineering, General Studies, would like to have a class which utilized the office as part of it's curriculum.
4. Need exists to explore the area of "State" personnel, as they are extremely helpful and have a variety of "unknown" professionals who are more than willing to assist students with career choices.
5. A need exists for a half-time person to concentrate on "P.R." for the office. This is a beneficial low-cost program with good outcome services for students, University and State. It should be utilized and publicized more!
6. Person(s) working in this office need to be good at P.R. and have ability to "read" the students enough to determine if they can handle an interview. Bad interviews or "no-shows" leave lasting negative effects with our resource people.

Career Research Seminar

The Career Research Seminar was a one credit course which evolved from awareness of the continued value of meeting STEPS TO SUCCESS students on a regular basis and of obvious student interest in the experiences of persons practicing different careers. The Career Research Seminar contained presentations from each college at Montana State University. These presentations were from Arts and Architecture, Nursing, Engineering, Education, Letters and Science, Business, and Agriculture. Each presentation involved the identification of critical aspects of each area such as the major discipline, subdisciplines, levels of difficulty, student participation in the discipline, present and projected job markets, and any unique facet of that particular area. Presentations were given by faculty members and senior level students in each discipline. Whenever possible a person from the MSU faculty was paired with someone from a business, industrial or service role outside the academic sphere.

To meet the requirements of the seminar students were expected to "job shadow" one person and extensively interview two persons in occupational roles in which the students were interested. Reports were prepared following the format of the Occupational Outlook Handbook.

Sixty-five (65) General Studies students participated in this 200 level seminar. Each student had to conduct at least two interviews with professionals in fields which interested them. In addition, each student had to select the most promising career area and perform a "job shadow". These "job shadows" involved the actual shadowing (following around) of one individual in their day of work.

Evaluation: Career Research Seminar

Pre-Post testiong of the 65 students who participated in the Career Research Seminar suggests that there was an increase in students interested in business and in education while there is a decrease of students interested in Letters and Science and nursing.

Although these decreases in terms of number of students are not traumatic, they were evident. Exhibit 9 shows some results of a general career research nature showing a pre-post test comparison. After the class, 60% indicated a change in career interest, 70% indicated a narrowing of career choice and approximately 50% indicated a change of factors relevant to their choice of careers. However, only 2 people out of the 65 individuals actually selected a career as a result of this workshop. 40% of the individuals indicated a change in why they wanted to attend college and 70% indicated a change in career interest not considered previously appropriate because of sex, age or money.

It would appear that from these pre-post surveys that although the Career Research Seminar did not facilitate the actual choice of a career, it did facilitate the career development and growth of students who participated.

Exhibit 9

INSTRUCTIONAL PROGRAMS

Pre/Post Testing-Career Research Seminar

PRE		POST	
COLLEGE OF AGRICULTURE	21	COLLEGE OF AGRICULTURE	24
Animal Science Option	2	Animal Science Option	1
Recreation Area Management Option	1	Recreation Area Management Option	1
Soils Option	1	Animal Science Option	2
Industrial Arts	2	Range Science Option	2
Industries Option	1	Recreation Area Management Option-Agricultural Science	2
Broadfield Teaching Option	3	Soils Option	1
Preforestry Program	8	Industrial Arts	3
Preveterinary Medicine Program	3	Broadfield Teaching Option	3
		Preforestry Program	7
		Preveterinary Medicine Program	3
COLLEGE OF ARTS AND ARCHITECTURE	43	COLLEGE OF ARTS AND ARCHITECTURE	45
Architecture	4	Architecture	4
Art	4	Art	5
Professional Design	5	Professional Design	4
Art History Option	1	Art History Option	1
Film & Television Production	4	Film & Television Production	4
Motion Picture Option	4	Motion Picture Option	4
Photography Option	8	Photography Option	8
Television Option	2	Television Option	3
Music Education	3	Music Education	3
Studio Teaching Option	1	School Music K-12 Broadfield Option	1
Theatre Arts	4	Studio Teaching Option	5
Theatre Administration	2	Theatre Administration	2
Theatre Arts Teaching	1	Theatre Arts Teaching	1

PRE	
SCHOOL OF BUSINESS	42
Business	10
Accounting Option	7
Business Education: Office Education Option	3
Business Education: Basic Business Option	3
Distributive Education and Marketing Option	2
Finance Option	2
Management Option	12
Marketing Option	4
Office Administration Option	4
Secretarial Program	5
COLLEGE OF EDUCATION	52
Elementary Education	6
Library Science	3
Music	1
Secondary Education	8
Physical Education	7
Health Education Option	2
K-12 Physical Education and Health Option	3
Pre-Physical Therapy Option	5
Recreation Option	4
Secondary School Option	1
Home Economics	2
Business Option	2
Child Development/Family Life Option	6
Education and Extension Option	1
Two-Year Certificate Program	1
SCHOOL OF NURSING	4

POST	
SCHOOL OF BUSINESS	50
Business	9
Accounting Option	7
Business Education: Office Education Option	2
Business Education: Basic Business Option	4
Distributive Education and Marketing Option	1
Finance Option	2
Management Option	12
Marketing Option	4
Office Administration Option	4
Secretarial Program	5
COLLEGE OF EDUCATION	57
Elementary Education	6
Library Science	2
Music	1
Secondary Education	6
Physical Education	6
Health Education Option	4
K-12 Physical Education and Health Option	5
Pre-Physical Therapy Option	8
Recreation Option	5
Secondary School Option	2
Home Economics	3
Business Option	2
Child Development/Family Life Option	7
Two-Year Certificate Program	2
SCHOOL OF NURSING	1

PRE	
COLLEGE OF LETTERS AND SCIENCE	153
Botany	3
Biology Teaching	1
Chemistry	1
Professional Option	1
Interdisciplinary Option	1
Chemistry Laboratory Option	2
Earth Sciences	5
Geography Option	2
Geology Option	6
Geophysics Option	2
Geographical Planning Option	1
Meteorology Option	3
Economics Science Option	1
English	4
Literature Option	5
Literature and Composition Teaching Option	3
Fish & Wildlife Management	11
History	4
Teaching Option	1
Mathematics	2
Statistics	1
Microbiology	1
Medical Technology	3
Modern Languages	5
Teaching	1
Philosophy	4
Philosophy & Religion	1
Physics	3
Professional Option	1
Interdisciplinary Option	1
Scientific Technician Option	1
Political Science	3
Policy Sciences Option	1
Prelaw Option	1
Public Administration Option	2
Premedicine	5
Psychology	12
Sociology	5
Anthropology	2
Rural Sociology	2

POST	
COLLEGE OF LETTERS AND SCIENCE	143
Botany	3
Biology Teaching	1
Chemistry	1
Professional Option	1
Interdisciplinary Option	2
Chemistry Laboratory Option	5
Teaching Option	2
Earth Sciences	5
Geography Option	2
Geology Option	6
Geophysics Option	2
Geographical Planning Option	1
Meteorology Option	3
Economics Science Option	1
English	5
Literature Option	5
Literature and Composition Teaching Option	2
Fish & Wildlife Management	11
History	4
Teaching Option	1
Mathematics	2
Statistics	1
Microbiology	1
Medical Technology	3
Modern Languages	5
Philosophy	4
Philosophy & Religion	2
Physics	3
Professional Option	1
Interdisciplinary Option	1
Scientific Technician Option	1
Political Science	3
Policy Sciences Option	2
Prelaw Option	2
Public Administration Option	3
Premedicine	5
Psychology	11
Sociology	4
Anthropology	2
Rural Sociology	2

PRE		POST	
COLLEGE OF LETTERS AND SCIENCE (cont.)			
Social Justice	5	Social Justice	5
Social Research	3	Social Research	3
Social Work	10	Social Work	9
Speech Communication	5	Speech Communication	4
General Option	1	General Option	2
Preprofessional Deaf Education Option	6	Preprofessional Deaf Education Option	7
Public Relations Option	3	Public Relations Option	5
Zoology	4	Speech Communication Education Option	1
		Zoology	4
COLLEGE OF ENGINEERING	34	COLLEGE OF ENGINEERING	34
Agricultural Engineering	2	Agricultural Engineering	2
Chemical Engineering	1	Chemical Engineering	1
Civil Engineering	5	Civil Engineering	6
Computer Science	5	Computer Science	6
Construction Engineering Technology	5	Construction Engineering Technology	5
Electrical Engineering	4	Electrical Engineering	4
Electrical & Electronic Engineering Technology	1	Electrical & Electronic Engineering Technology	1
Engineering Science	2	Industrial & Management Engineering	11
Industrial & Management Engineering	2	Engineering Science	3
Mechanical Engineering	3	Mechanical Engineering	3
Mechanical Engineering Technology	2	Mechanical Engineering Technology	2
GENERAL STUDIES	3	GENERAL STUDIES	2

Instrumentation

Attitude Towards Women Scale (Appendix, Exhibit 10)

The Attitude Towards Women Scale (AWS) was chosen for use in this research project because of its wide useage in a number of studies, its ease in taking, and the applicability of the instrument for this project.

This scale reflects the degree to which an individual holds traditional or liberal views towards women. The AWS measures abstract attitudes rather than behaviors or roles. There are three forms of the AWS: a 55 item Likert-type scale, a 25 item version and a 15 item version. The 25 item version was chosen because of its high correlation with the 55 item scale, the ease of administration, and the limited amount of time required for testing.

An example of 2 items are as follows:

9. There should be a strict merit system in job appointment and promotion without regard to sex.

   a. AS b. AM c. DM d. DS

15. It is ridiculous for a woman to run a locomotive and for a man to darn socks.

   a. AS b. AM c. DM d. DS

These items measure the degree to which individuals hold traditional or liberal views with regards to the rights and roles of women in our society.

Spence, Helmreich and Stapp (1973) stated that:

> "A number of comparisons were made between scores on the total AWS and the short form for the student sample. The results of these analyses are described below. Data were also available from a number of parents of these students (292 mothers and 232 fathers). As cross-validation, the same analyses on the same 25-item scale were performed on data from the parents.

Decile Scores (Rounded) and Other Normative Data for the 25-Item AWS from Students and Parents

	Students		Parents	
Deciles	Males	Females	Fathers	Mothers
10	29	34	25	26
20	33	40	30	31
30	37	43	33	34
40	41	47	35	38
50	44	51	38	42
60	46	54	40	44
70	51	56	44	48
80	55	59	48	52
90	61	65	43	57
Mean	44.80	50.26	39.22	41.86
SD	12.07	11.68	10.49	11.62
Range	17-74	20-75	10-69	13-73

For each of the groups, a correlation was obtained between the Ss scores on the 25-item version and the full scale. For the student samples, the resulting rs were .968 for the males and .969 for the females. The figures for the mothers and fathers were .956 and .963 respectively. Correlations were also obtained between total scores on the 25-item form and scores on the individual items. For the students, all r values were significant ($p < .001$) and ranged from .31 to .73 with the modal value for both sexes being in the .50s. For the parents, the values were somewhat lower, ranging from .14 to .70 with the mode being in the .40s. For both student and parent groups, a comparison of these part-whole correlations with those between each of the 25 items and scores on the full AWS showed that the former tended to be slightly higher.

The scale was factor analyzed using the SPSS (Nie. Bent, & Hull, 1970) principal axis routine. The scale proved to be essentially unifactorial, with the first unrotated factor accounting for 67.7% of the variance for females and 69.2% of the variance for males.

In summary, the analyses of both the student and the parent samples indicate that scores on the 25-item form are almost perfectly correlated with scores on the full set of 55 items and that the whole-part correlations and factor structures are also highly similar.

Normative Data

Selected descriptive data for the males and females in both types of samples can be found. A comparison of the means by t tests indicated that just as with the full scores, the means of the female students were significantly ($p < .001$) higher (more liberal) than the males, the means of mothers higher than fathers, and students higher than parents."

Bem Sex Role Inventory (BSRI) (Appendix E, Exhibit 11)

This scale was chosen because of its uniqueness and its applicability to the project. It treats masculinity and femininity as two independent dimensions rather than opposite ends of a single dimension. In so doing it allows a person to say they are both masculine and feminine. Unfortunately most tests reflect a bias that persons are either one or the other--not both. We feel people can be both. It was developed with university undergraduates and was seen as an instrument suitable for our population. Another consideration was ease of administration.

With regards to reliability and validity, the WEEAP Measures of Educational Equity for Women (1977) state the following:

"RELIABILITY

Internal consistency. Coefficient alphas, computed separately for the Masculinity, Femininity, and Social Desirability scores of subjects in each score, Femininity-Masculinity, which is highly correlated with the Androgyny t ratio, demonstrated a reliability of .85 and .86 with the Stanford and Foothill samples respectively. The Masculinity and Femininity scores are not only logically independent but also empirically independent as well. (Standford female r = -.14, male r = .11; Foothill female r = -.07, male r = -.02).

Stability. To establish test-retest reliability, the BSRI was administered a second time to 28 males and 28 females from the Stanford normative sample about 4 weeks after the first administration. The product-moment correlations computed for the first and second administrations of the BSRI provided high reliability for Masculinity, Femininity, Androgyny, and Social Desirability scores (Masculinity r = .90; Femininity r = .90; Androgyny r = .93; Social Desirability r = . 89)

VALIDITY

Content validity. For the Masculinity and Femininity scales, the author compiled a list of about 200 personality characteristics that seemed both positive in value and either masculine or feminine in tone. For the Social Desirability scale, she compiled an additional list of 200 characteristics that seemed neither masculine nor feminine in tone. One hundred Stanford undergrad-

uates (50 female, 50 male) rated the desirability of these 400 personality characteristics either "for a man" or "for a woman." The final items for the BSRI were selected on the basis of those rated more desirable in American society for one sex than for the other.

Concurrent validity. Subjects for the test-retest study also filled out the Masculinity-Femininity scales of the California Psychological Inventory (CPI) and the Guilford-Zimmerman Temperament Survey. The author found that the BSRI is not correlated with the Guilford-Zimmerman scale although it shows moderate correlation with the CPI. She proposes that the fact of the low correlations indicates that the BSRI is measuring an aspect of sex-roles which is not directly tapped by either of these 2 scales."

The BSRI consists of twenty adjectives describing masculine personality characteristics, twenty adjectives describing feminine personality characteristics, and twenty adjectives describing neutral personality characteristics. The first adjective and every third there after is masculine. The second and then every third there after is feminine and every third item is neutral.

On this test the adjectives are intermixed and subjects were asked to indicate on a scale from 1 (never or almost never) to 7 (always or almost always true).

Thus, the BSRI consists of 60 personality characteristics and subjects are asked to use these characteristics in order to describe oneself. In other words, students and faculty were asked to indicate on a scale from 1-7 how true certain characteristics were of them.

Example

1 7

_____ 1. Self-reliant

_____ 2. Yielding

_____ 3. Helpful

_____ 4. Defends own beliefs

_____ 5. Cheerful

_____ 6. Moody

_____ 7. Independent

Students and faculty completed the BSRI at the beginning and termination of the STEPS program.

Rosenberg Self-Esteem Scale (Appendix E, Exhibit 12)

Careful perusal of self-esteem scales suggested that Rosenberg's scale would be highly desirable for this project. Rosenberg (1965) was one of few individuals who attempted to achieve a unidimensional measure of global self regard entitled self esteem. Although it is not a new instrument, it has been reviewed quite well. Too, it is simple to read and score; in addition its brevity (only 10 questions) add to its desirability. This scale, as with others previously mentioned, is short, easy to administer and can be completed with several other scales in one short testing period.

Rosenberg's (1965) conception of self-esteem included the following: "when we speak of high self-esteem . . . we shall mean that the individual respects himself, considers himself worthy, he does not necessarily consider himself better than others, but he definitely does not consider himself worse, he does not feel that he is the ultimate in perfection but, on the contrary, recognizes his limitations and expects to grow and improve."

The ten items are Likert type questions, with four yes responses: strongly agree, agree, strongly disagree, and disagree. The Institute of Social Research at the University of Michigan general critique of the Self-Esteem scale as well as the reliability and validity suggests it is a good measure to use in situations of this nature.

With regards to reliability:

> "Using the Guttman procedure, the reproducibility of this scale was 92 percent and its scalability was 72 percent for Rosenberg's sample of 5,024 students. A study by Earle Silber and Jean S. Tippett showed a test-retest reliability of .85 for a group of college students retested after two weeks."
>
> In addition, "several attempts were made to assure validity. (1) fifty young adult 'normal volunteers' employed by the National Istitute of Mental Health filled out the Self-Esteem Scale and were independently rated by ward nurses on Leary Scales (Leary, 1957). A significant association was obtained between self-esteem scores and depression (as judged by the nurses). The depression items were 'often gloomy' and 'frequently disappointed.' (2) In the larger survey (N = 5, 024),

a significant correlation appeared between self-esteem and depressive affect (measured by another self-administered scale). (3) A significant correlation was obtained between self-esteem and a number of psychosomatic symptoms. (4) There was significant association between self-esteem and choice as a class leader in a sociometric study involving 272 high school seniors. The first three relationships were negative, the last was positive. Related findings are reported throughout Rosenberg's book."

In summary, the Institute for Social Research stated that they felt that the scale was carefully contructed, and that it could make theoretically meaningful discriminations between groups of adolescents. Its limitations would be with studies involving ideal self-concept . . . and there are questions regarding its use with adults. "However, where a short and general index of self-esteem is required, this scale is recommended."

Example

I feel that I'm a person of worth, at least on an equal plane with others.

_____ 1. Strongly Agree

_____ 2. Agree

_____ 3. Disagree

_____ 4. Strongly Disagree

Attitude Scale of the Career Maturity Inventory (Appendix E, Exhibit 13)

John O. Crites began his scientific investigation of career maturity in 1961. He has defined vocational maturity as both attitudes and competencies. Attitudinal dimensions of vocational maturity, which are more cognitive in nature include involvement in the choice process, orientation towards work, independence in decision-making, preference for choice factors and conceptions of the choice process. The Attitude Scale is a 50 item true-false questionnaire which has a readability level of approximately the 6th grade. Ease of administration and applicability made it excellent for this project.

Examples

1. T F Once you choose a job, you can't choose another one.
2. T F In order to choose a job, you need to know what kind of person you are.
3. T F I plan to follow the line of work my parents suggest.

Hanson (1974) stated that the Crites Career Maturity Inventory can be a useful tool to identify problems in career development, to determine career maturity, to evaluate career education programs, and to assess curriculum and guidance needs of students.

A number of studies can be found in the literature pertaining to career education and the use of Crites Attitude Scale.

Aiken and Johnson's study (1973) concerned effects of group reinforcement counseling on frequency of career information seeking behaviors for college freshmen and sophomore male students. The Attitude Scale was used to identify vocational maturity-immaturity. Results showed that subjects with a vocationally consistent personality profile tended to increase their information seeking responses more than the vocationally inconsistent. A positive relationship existed between the use of group reinforcement counseling and an increase in career information seeking responses.

Smith and Evans' study (1973) concerned an experiment involving college students receiving individual counseling, those in a five week vocational guidance program, and a controlled group with no treatment to determine which contributed more to vocational development. Evaluation using Tiedman and O'Hara's Vocational Decision Checklist and a Counseling Assessment Form showed the experimental group most effective with the individual counseling more effective than the control receiving no treatment. There was no difference found among the three groups in regard to individual counselors, sex of the students, or in student counseling assessments.

Research reveals that life planning workshops can be used as a vehicle for exploration of personal and emotional growth, educational and vocational growth, and interpersonal growth.

Johnson (1977) indicated that workshop results led to statistically significant changes in a more internally controlled direction for the participants. Satisfaction with the workshops was uniformly high at Brigham Young University which is consistent with findings at Colorado State University. The workshop starts the students in looking at how they perceive themselves and what their needs and values are. After exploring what they would like to be, they become aware of the difference between these two positions.

Knickerbocker and Davidshofer (1978) examined the impact of a life planning workshop upon attitudes toward future life planning and self- actualizing attitudes of feeling reactivity and self-regard. Results showed that the 34 women and eight men participants had significantly higher mean scores on measures of positive attitudes toward future planning and feeling reactivity. These gains continued over a mean follow-up period of three weeks. The findings indicate that participation in a life planning workshop program fostered an attitude of confidence in formulating realistic future goals and a sense of personal competence in problem solving and decision-making. Participation encouraged participants to have confidence in their ability to make personal changes necessary for attainment of their goals.

Mencke and Cochran (1974) hypothesized that participation in a life planning workshop would foster greater acceptance of active responsibility for one's own career direction, a greater recognition that choice of an academic major is only one decision in the continuing process of vocational development, and greater awareness of personal attributes that contribute to career choice. The Attitude Scale plus other items were used to test these hypotheses. The results failed to confirm any of the three hypotheses on the experimental group of 64 male resident hall members at the University of Arizona. No changes were found in attitudes about choosing a career or perceptions of strengths and weaknesses. The life planning workshop appeared to influence the behaviors of the participants in two important ways. The participants tended to take more responsibility for career decision-making by actively seeking information relevant to their career, their

future plans, and themselves. They also tended to consider career areas and majors more congruent with their measured interests than those considered by subjects who had not participated. It was concluded that behavioral indices have an advantage over attitudinal measures of attitude for future studies in this area.

Chapter 4

STEPS TO SUCCESS EVALUATION

Introduction

The overall intent of this evaluation was to measure the effectiveness of this program as a model for the reduction of sex-role stereotyping in career choice.

There were three groups which we were concerned with: Group 1 were the STEPS TO SUCCESS students. Group 2 were the other General Studies students or non-STEPS students (control group) and Group 3 were control group 2. Each of these groups had been exposed to both pre and post tests. These instruments have been proven to be reliable and valid and represent what is believed to be the good instruments for this study. As an overview of the model, each STEPS student was exposed to several parts of the program. First of all, a Career Life Planning Workshop. Second, intensive advising, third, a Career Research Seminar and fourth, a math improvement program. The control group, however, composed of a random group of General Studies students were not exposed to these program elements. It is the hypothesis of this research that exposure to these various aspects will, in fact, assist students in exploring career alternatives and modify basic attitudes towards sex-role stereotyping.

General Information Questionnaire

Three populations (control group, STEPS students and Career Research Seminar) were given the General Information Questionnaire to complete. Appendix E shows the General Information Questionnaire administered to these three populations. Exhibit 15 shows the data summary of the General Information Questionnaire for these groups. From Exhibit 15, the data summary, note that the control group has a higher percentage of 19 year olds than either the STEPS or the Career Research Seminar. Secondly, the control group is made up of a larger number of third quarter students than either the STEPS or the Career Research Seminar

students who were mainly first quarter and second quarter students. Thirdly, we can note that the general breakdown of parental professions were relatively consistent between the control group, STEPS students and Career Research Seminar students. We also note that the Career Research Seminar students had a considerably lower number of students from open country (but not on a farm) than did the other two groups and that the control group had a considerably lower number of individuals from these big cities than did these other two groups. Generally, the three populations (control group, STEPS students, and Career Research Seminar students) are relatively consistent with each other.

Exhibit 11

GENERAL INFORMATION

Data Summary of demographic information for Control Group, STEPS Students, and Career Research Seminar.

NAME _____ DATE _____

As a part of the research aspect of the STEPS program we would like you to answer the following information with the answer which best fits you.

	Control	STEPS	Career Research Seminar
1. Please indicate your sex.			
A. Female	31.8%	60.7%	56.1%
B. Male	61.9%	38.5%	43.9%
2. Please indicate your religious preference.			
A. Catholic	14.3%	31.6%	33.9%
B. Jewish	0%	1.7%	1.8%
C. Protestant	42.9%	31.7%	30.4%
D. none	19%	11.1%	14.3%
E. other	23.8%	17.9%	19.6%
3. Please indicate your age.			
A. 17 years old	0%	0%	3.5%
B. 18 years old	28.6%	61.9%	38.6%
C. 19 years old	42.9%	20.3%	28.1%
D. 20 years old	14.3%	8.5%	14%
E. over 20 years old	14.3%	9.3%	1.8%
4. Please indicate the number of quarters you have been enrolled at MSU.			
A. 1 quarter	0%	0%	28.1%
B. 2 quarters	14.3%	92.3%	59.6%
C. 3 quarters	66.7%	2.6%	1.8%
D. 4 quarters	9.5%	3.4%	5.3%
E. more than 4 quarters	9.5%	1.7%	3.5%

5. Please indicate which of the careers is closest to describing the occupation of your father and your mother. Mark only one answer. If she/he works on more than one job, mark the most important one. If she/he is temporarily unemployed, deceased, or if she/he is retired, mark the one she/he lheld last.

   A. Professional-Such as clergy, dentist, doctor, engineer, lawyer, professor, scientist, teacher, etc.

   B. Semiprofessional-Such as accountant, airplane pilot, actor, armed forces officer, medical technician, musician, writer, librarian, artist, dental technician, engineering aid, etc.

   C. Manager-Proprietor-Executive-Such as sales manager, store manager, owner of small business, factory supervisor, wholesaler, retailer, contractor, restaurant owner, manufacturer, banker, official in large company, government official, etc.

   D. Salesperson-Such as life insurance, real estate or industrial goods, Salesperson, etc.

   E. Clerical Worker-Such as sales clerk, office clerk, bookkeeper, ticket agent, etc.

   F. Skilled worker or foreperson-Such as baker, carpenter, electrician, mechanic, plumber, plasterer, tailor, foreperson, painter, etc.

G. Farm or Ranch-owner or manager

H. Service or Protective-Such as armed forces enlistee or non-commissioned officer, barber, bus driver, fire fighter, beautician, polic officer, waiter, etc.

I. Stays at home

	Control		STEPS		Career Research Seminar	
Occupation	Father	Mother	Father	Mother	Father	Mother
Professional	9.5%	14.3%	22%	15.3%	29.8%	16.4%
Semi-Professional			9.3%	6.8%	10.5%	
Manager-Proprietor-Executive	33.3%	14.3%	31.4%	6.8%	29.8%	7.3%
Salesperson	4.8%	4.8%	1.7%	1.8%	5.3%	5,5%
Clerical Worker	9.5%	38.1%		19.5%	1.8%	18%
Farm or Ranch	23.8%		13.6%	.8%	7%	
Service or Protective	4.8%	4,8%	10.2%	6.8%	5.3%	7.3%
Skilled worker or foreperson	14.3%		2.5%	5.1%	10,5%	29.1%
Stays at Home		23.8%	9.3%			32.7%

	Control	STEPS	Career Research Seminar
7. Please indicate the type of place that comes closest to describing the area in which you grew up.			
A. open country but not on a farm	14.3%	13.2%	7.3%
B. on a farm/ranch	28.6%	21.1%	16.4%
C. a rural city (10,000-49,999)	23.8%	25.4%	29.1%
D. A town or village (2,500-9,999	28.6%	17.5%	20%
E. in a large city (50,000 and over)	4.8%	22,8%	27.3%

GPA Analysis

Due to the high degree of personal attention given to the STEPS students versus the non-STEPS students, it was hypothesized that this would effect the overall GPA of the STEPS students as compared with non-STEPS students. This hypothesis was tested and in fact, was proven out The basic conclusion for Fall quarter was that STEPS students were the same as non-STEPS students when comparing the predicted GPA relative to the actual GPA.

The basic conclusions for Winter quarter are that the STEPS students at the 5% significance level were better than other General Studies control group students.

The basic conclusion drawn during Spring quarter is that STEPS students are consistently better than non-STEPS students. Again, what we see happening is that STEPS students are consistently improved with regards to their GPA. This is believed to be due to the personalized attention given to STEPS students and more time to mature in the system.

Fairmont Hot Springs Faculty Workshops

The Fairmont Hot Springs faculty workshops were workshops given to faculty members in an attempt to increase their awareness and attitudes regarding stereotypings with regards to career choice. These workshops were administered to two groups of faculty members. Exhibit 19 shows the evaluation of Group I. Exhibit 20 shows the evaluation of Group II. The evaluation for Group I, the first group of faculty members was quite high and consistently had very good comments. However, the evaluation for the second group of faculty members was much higher than that of Group I. In fact, when Groups I and II were asked "their overall impressions" of the workshop and their reactions to the "ideas and activities presented" they reversed their response on very good and good, with Group II almost tripling their "very good" response as compared to Group I.

The first group thought the time involved was good whereas Group II thought the time involved was very good. This "doubling reverse effect" was also found in items concerned with amount of learning (item 5) and time permitted (item 6). Clearly, both groups found these workshops worthwhile, with Group II finding it more beneficial (overall).

Exhibit 12 FAIRMONT HOT SPRINGS WORKSHOP

Evaluation of Group I

Male___ Female____ Date_____ ____

Participants: In order that an evaluation may be made of this program, we are requesting your assistance. Please complete this questionnaire by putting check marks in the appropriate blanks.

1. My over all impression of the workshop was:

   Very Good 7 Good 17 Fair 2 Poor 0

2. The ideas and activities presented at this workshop were:

   Very Good 4 Good 14 Fair 5 Poor 0

3. I found the format of the workshop to be:

   Very Good 3 Good 17 Fair 6 Poor 0

4. The time involved and the schedule that was arranged was:

   Very Good 8 Good 15 Fair 5 Poor 0

5. In terms of learning about sex-role stereotyping at this workshop, I found it to be:

   Very Good 7 Good 14 Fair 3 Poor 1

6. In the time permitted the coverage was:

   Very Good 7 Good 15 Fair 4 Poor 0

7. My attendance at this workshop should prove to be:

   Very Good 10 Good 11 Fair 4 Poor 1

8. Please Rate Each Type of Format

   Informal Discussion

   Very Good 20 Good 5 Fair 1 Poor 0

   Videotape

   Very Good 14 Good 12 Fair 0 Poor 0

Lecturette

Very Good 2 Good 13 Fair 9 Poor 3

Experiential

Very Good 10 Good 10 Fair 6 Poor 0

Exercises

Very Good 9 Good 11 Fair 6 Poor 0

9. How often a day does your job bring you into contact with (circle the number that applies):

		Rare				Frequent				
a.	Male Students	1	2	3	4	5	3	2	1	3	15
b.	Female Students	1	2	3	4	5	4	2	0	3	15
c.	Male Faculty	1	2	3	4	5	1	0	6	5	14
d.	Female Faculty	1	2	3	4	5	2	2	8	6	6
e.	Male Administration	1	2	3	4	5	1	2	4	3	15
f.	Female Administration	1	2	3	4	5	4	8	3	1	8

10. Please read all of the following statements. Then circle the letter in front of those that state how you feel about the workshop as a whole.

5 a. It was one of the most beneficial workshops that I have attended.
0 b. It was a complete waste of time.
2 c. Exactly what I wanted.
0 d. I didn't learn a thing.
17 e. I hope we have another one next year for other faculty and administrators.
0 f. It was very poorly handled.
18 g. It provided the kind of experience that I can apply to my own situtation.
3 h. I left dissatisfied.
19 i. It helped me personally.
1 j. It was much too superficial.
19 k. I think it served its purpose.
0 l. It didn't hold my interest.
15 m. It had some merits.
1 n. I am not taking any new ideas away.
6 o. It was fair.
3 p. It was too general.
3 q. It was neither very good nor very poor.
2 r. It was not exactly what I wanted.
4 s. I was mildly disappointed.

11. What was the major strength of the workshop?_____

_____

_____

12. What was the major weakness of the workshop?_____

_____

_____

13. If, with the stroke of your pen, you could change anything about the workshop, what would it be?_____

_____

_____

14. Will you do anything differently in your own position as a result of this workshop? _____ If yes, what?

_____

_____

15. Will your skills, attitudes and behavior change as you work with students and colleagues as a result of this conference?
Yes_____ No_____ If yes, please specify in what ways.

_____

_____

16. Which lecturer did you relate to the best?_____

17. Any additional comments:

11. What was the major strength of the workshop?

-Getting to know, in a different way, those with whom I work. The small group work.

-Interaction among colleagues, self awareness of feelings and attitudes.

-The various exercises we participated in and the informal get togethers.

-Expertise of the resource people.

12. What was the major weakness of the workshop?

-I don't think it had any major weaknesses.

-The beginning was very boring and slow moving--needed more action at the beginning.

-Time element.

13. If, with the stroke of your pen, you could change anything about the workshop, what would it be?

-The slow beginning.

-Presentations with fewer ideas so what was said could be absorbed.

-More info on the act that we did in "BORN FREE".

14. Will you do anything differently in your own position as a result of this workshop?

-Personally, I will be more attuned to the problem. Professionally, I will be more concerned with SS and CS.

-Try to listen more, ask questions and say what I am hearing to the one addressing you.

-I don't know.

-More guidance, more realistic thinking and relating about careers.

15. Will your skills, attitudes and behavior change as you work with students and colleagues as a result of this conference?

-I can't be certain at this time.

-Am uncertain-hopefully I will be able to talk with my colleagues more openly about sex stereotyping.

-I don't know.

-Indefinite.

16. Which lecturer did you relate to the best?

-both

-the last session

-Tom Skovholt

-difficult to say

Exhibit 13 FAIRMONT HOT SPRINGS WORKSHOP

Evaluation of Group II

Male____ Female____ Date_____

Participants: In order that an evaluation may be made of this program, we are requesting your assistance, Please complete this questionnaire by putting check marks in the appropriate blanks.

1. My over all impression of the workshop was:

   Very Good 16 Good 5 Fair 0 Poor 0

2. The ideas and activities presented at this workshop were:

   Very Good 14 Good 7 Fair 0 Poor 0

3. I found the format of the workshop to be:

   Very Good 9 Good 11 Fair 0 Poor 0

4. The time involved and the schedule that was arranged was:

   Very Good 12 Good 8 Fair 0 Poor 0

5. In terms of learning about sex role stereotyping at this workshop, I found it to be:

   Very Good 16 Good 3 Fair 1 Poor 0

6. In the time permitted the coverage was:

   Very Good 12 Good 7 Fair 1 Poor 0

7. My attendance at this workshop should prove to be:

   Very Good 12 Good 7 Fair 1 Poor 0

8. Please Rate Each Type of Format

   Informal Discussion

   Very Good 15 Good 5 Fair 0 Poor 0

   Videotape

   Very Good 18 Good 2 Fair 0 Poor 0

Lecturette

Very Good 9 Good 6 Fair 3 Poor 0

Experiential

Very Good 10 Good 10 Fair 0 Poor 0

Exercises

Very Good 12 Good 8 Fair 0 Poor 0

9. How often a day does your job bring you into contact with (circle the number that applies):

	Rare				Frequent					
a. Male Students	1	2	3	4	5	1	0	3	3	12
b. Female Students	1	2	3	4	5	0	0	3	5	13
c. Male Faculty	1	2	3	4	5	1	2	3	4	10
d. Female Faculty	1	2	3	4	5	4	2	3	4	4
e. Male Administration	1	2	3	4	5	1	0	2	4	11
f. Female Administration	1	2	3	4	5	7	3	2	2	6

10. Please read all of the following statements. Then circle the letter in front of those that state how you feel about the workshop as a whole.

11 a. It was one of the most beneficial workshops that I have attended.
0 b. It was a complete waste of time.
5 c. Exactly what I wanted.
0 d. I didn't learn a thing.
17 e. I hope we have another one next year for other faculty and administrators.
0 f. It was very poorly handled.
13 g. It provided the kind of experience that I can apply to my own situtation.
1 h. I left dissatisfied.
15 i. It helped me personally.
2 j. It was much too superficial.
8 k. I think it served its purpose.
0 l. It didn't hold my interest.
4 m. It had some merits.
0 n. I am not taking any new ideas away.
2 o. It was fair.
1 p. It was too general.
1 q. It was neither very good nor very poor.
1 r. It was not exactly what I wanted.
1 s. I was mildly disappointed.

11. What was the major strength of the workshop?_____

_____

_____

12. What was the major weakness of the workshop?_____

_____

_____

13. If, with the stroke of your pen, you could change anything about the workshop, what would it be?_____

_____

_____

14. Will you do anything differently in your own position as a result of this workshop? _____ If yes, what?

_____

_____

15. Will your skills, attitudes and behavior change as you work with students and colleagues as a result of this conference?
Yes_____ No_____ If yes, please specify in what ways.

_____

_____

16. Which lecturer did you relate to the best?_____

17. Any additional comments:

11. What was the major strength of the workshop?

-Discussions by individuals expressing their responses to posed questions and suggestions.

-The small group discussions and getting to know and talk with new people.

-Good organization-participants needs(all) well met-group was homogeneous and supportive-brought people from different disciplines together-very unpretentious, sincere and informed consultants.

-The awareness that I have that there is a much worse problem than I had expected, alas, and that I had been living in a supportive subset of people.

-Bringing a variety of MSU staff together-sharing informally and getting beyond the superficialities of your job roles.

12. What was the major weakness of the workshop?

-Not enough time to corrolate results of individual groups to the whole.

-The lecture on the male perspective and the domination of large group discussions by a few persons.

-Probably should have "exploded" early the gut issue controversies-We just got started the last hour...perhaps that is our responsibility as well.

-Too much sitting.

-Lack of time to properly tackle MSU issues and concerns: To identify, prioritize and present strategies. Also missed were key MSU personnel (Testing and Counseling, Career Planning, Deans, top administrators) who were really the ones who run the place and have power to change.

13. If, with the stroke of your pen, you could change anything about the workshop, what would it be?

-Amount of time spent on resolving the "girl" involvement.

-Allow for more informal group facilitation--that was lacking and better discussions could result.

-More comfortable chairs.

-Eliminate lecture on male perspective.

14. Will you do anything differently in your own position as a result of this workshop?

-Recognize sex-roles and try to make appropriate corrections.

-Not really-this has been one of my priorities for years!

-I'll try to make people more aware of the dimensions of the problem is sex-role stereotyping.

-Not really-I shall continue to act and speak in egalitarian ways.

15. Will your skills, attitudes and behavior change as you work with students and colleagues as a result of this conference?

-Cannot be specific-but in general to break down stereotypes.

-I have a better understanding of MSU persons and the process of change in order to be a better change agent.

-I'll try harder to make others aware of the problem.

-I feel comfortable and good about where I am.

16. Which lecturer did you relate to the best?

-Sunny

-both

-Sunny

-Sunny

17. Any additional comments:

-This was tremendous--let's bring it back to all the departments!

Overall, a good experience.

Rosenberg Self-Esteem Scale

Rosenberg's (1965) conception of self-esteem included the following:

> "When we speak of high self-esteem . . . we shall mean that the individual respects himself, considers himself worthy, he does not necessarily consider himself better than others, but he definitely does not consider himself worse, he does not feel that he is the ultimate in perfection but, on the contrary, recognizes his limitations and expects to grow and improve."

The ten items are Libert type questions with four responses: strongly agree, agree, strongly disagree, and disagree. Rosenberg's self-concept scale measured the degree that individuals or a group of individuals perceive themselves to be in terms of their own self-concept. Appendix E shows the self-concept questionnaire used for both the STEPS and non-STEPS populations. Exhibit 21 shows the Self-Concept Data Summary and the percentage responses of both groups of students.

The data was analyzed using two methods: one method was to perform an item analysis taking certain items and comparing them on a pre-post basis for the two populations. The second performed was to look at total responses in a positive to negative sense, since some items were reversed from positive to negative in terms of the response to self-concept, and comparing those pre to post. Both analysis indicate there was no change in self-concept between the pre and post test for the control group or the STEPS students. There was, however, a slightly larger change for the STEPS students than for the control group but this change was still not statistically significant.

Exhibit 14 SELF-CONCEPT DATA SUMMARY

This is a study of the Self-Concept. There are no wrong or right answers. We are interested in the answer that best fits you personally.

Below is a list of ten items which discuss how you feel about your self. Please study each item carefully and on this sheet, answer each question as follows:

SA - Strongly Agree D - Disagree

A - Agree SD - Strongly Disagree

Please circle one that fits you best.

Items

1. I feel that I'm a person of worth, at least on an equal plane with others.

	SA	A	D	SD
Control Pre	46.2%	50%	3.8%	0%
Control Post	61.9%	33.3%	4.8%	0%
STEPS Pre	55.7%	42.6%	1.7%	2.5%
STEPS Post	63.5%	34.1%	1.2%	1.2%

2. I feel that I have a number of good qualities.

	SA	A	D	SD
Control Pre	38.5%	61.5%	0%	0%
Control Post	71.4%	28.6%	0%	0%
STEPS Pre	45.2%	54.8%	0%	0%
STEPS Post	62.4%	36.3%	1.2%	0%

3. All in all, I am inclined to feel that I am a failure.

	SA	A	D	SD
Control Pre	0%	0%	42.3%	57.7%
Control Post	0%	0%	47.6%	52.4%
STEPS Pre	0%	5.2%	55.7%	39.1%
STEPS Post	2.4%	2.4%	45.9%	49.4%

4. I am able to do things as well as most other people.

	SA	A	D	SD
Control Pre	26.9%	69.2%	3.8%	0%
Control Post	33.3%	66.7%	0%	0%
STEPS Pre	27%	68.7%	4.3%	0%
STEPS Post	43.5%	52.9%	1.2%	2.4%

5. I feel I do not have much to be proud of.

	SA	A	D	SD
Control Pre	3.8%	3.8%	42.3%	57.7%
Control Post	4.8%	4.8%	19%	71.4%
STEPS Pre	1.7%	5.2%	42.6%	50.4%
STEPS Post	4.7%	3.5%	45.0%	45.9%

6. I take a positive attitude toward myself.

	SA	A	D	SD
Control Pre	23.1%	73.1%	3.8%	0%
Control Post	33.3%	57.1%	9.5%	0%
STEPS Pre	26.1%	58.3%	15.7%	0%
STEPS Post	32.1%	59.5%	7.1%	1.2%

7. On the whole, I am satisfied with myself.

	SA	A	D	SD
Control Pre	19.2%	57.7%	23.1%	0%
Control Post	19%	61.9%	19%	0%
STEPS Pre	16.4%	60.3%	23.3%	0%
STEPS Post	25.9%	56.5%	16.5%	1.2%

8. I wish I could have more respect for myself.

	SA	A	D	SD
Control Pre	7.7%	30.8%	42.3%	19.2%
Control Post	19%	19%	33.3%	28.6%
STEPS Pre	4.3%	44.3%	42.6%	8.7%
STEPS Post	6%	38.1%	42.9%	13.1%

9. I certainly feel useless at times.

	SA	A	D	SD
Control Pre	0%	68%	28%	4%
Control Post	9.5%	57.1%	33.3%	0%
STEPS Pre	9.6%	64.3%	20.9%	5.2%
STEPS Post	6%	61.9%	22.6%	9.5%

10. At times I think I am no good at all.

	SA	A	D	SD
Control Pre	4.2%	29.2%	41.7%	25%
Control Post	0%	20%	40%	40%
STEPS Pre	1.7%	38.3%	37.4%	22.6%
STEPS Post	6%	30.1%	42.4%	21.7%

Career Maturity Index

"The Attitude Scale elicits the feelings, the subjective reactions, the dispositions that the individual has toward making a career choice and entering the world of work. Is work seen as a meaningful focus of life or is it viewed as drudgery? How involved and independent is the individual in the choice process? What considerations are made in selecting a career? These and other conative aspects of decision making are stated in the items of the Attitude Scale as they have actually been verbalized by young people. More specifically, five attitudinal clusters are surveyed:

* involvement in the career choice process;
* orientation toward work;
* preference for career choice factors;
* conceptions of the career choice process."

Appendix E shows the Attitude Scale Questionnaire which was filled out by three populations. All groups took both pre and post tests. Table 9 shows the data summary for this instrument for the STEPS students, control group and Career Research Seminar students. Looking at the data summary in Table 9 , several interesting things can be observed.

Table 9. Crites Career Maturity Index Questionnaire Results in Terms of Maturity Index

	Pre	Post
STEPS Students	76%	86%
Control Group	72%	82%
Career Research Seminar	73%	83%

For all groups there is a 10 point pre-post difference. The control group gained as much career maturity as did the STEPS students, via the "college experience". However, an item analysis revealed that some items were statistically significant for the STEPS students as compared to the control group. The Items which were statistically significant in their change between the pre test and the post test for the STEPS students were:

10. I often day dream about what I want to be and I really haven't chosen a line of work yet.
16. I don't know how to go about getting into the kind of work I want to do.
19. I don't know what courses I should take in school.
21. By the time you are 15 you should have your mind pretty well made up about the occupation you intend to enter.
30. The best thing to do is to try out several jobs and then choose the one you like the best.
49. As far as choosing an occupation is concerned, something will come along sooner or later.

These seven items on a pre-post basis were the items that were statistically significant on the .01 level for the STEPS students.

Perusal of these items for the control group indicates that only Items #16 and #30 were statistically significant on the .01 level. If we look at the Career Research Group, we find that only Items 16, 21 and 28 change significantly. These items demonstrated major change between the STEPS students, the control group and the Career Research Seminar and were items that relate to the selection of a career and the process of the selection of a career. As a brief summary then, it can be seen that the overall career maturity questionnaire was not statistically different between the STEPS students and the control group, although some items were seen as statistically significant at the .01 level.

Attitude Index Survey or the Short Form of the Attitude Towards Women (ATW) Scale

The Attitude Towards Women Scale measures statements about the recognition of the rights and roles of women in such areas as vocational, educational and intellectual activities as well as dating, etiquette, sexual and marital behaviors. The 25 item test measures the degree to which individuals hold traditional or liberal views with regards to the rights and roles of women in our society.

Appendix E shows the Attitude Index Questionnaire. Exhibit 22 shows a summary of the items which were significantly changed between pre and post tests for various groups. These groups were STEPS students, control group students, Career Life Planning faculty facilitators, winter and spring, and faculty workshop participants I and II. The asterisks indicate those items that were significantly changed between the pre-post testing.

Exhibit 22 shows the Summary of the Attitude Index/Attitude Toward Women Survey. The percentages at the bottom of Exhibit 22 indicate results in terms of items that changes between pre and post tests in a favorable direction. Therefore, 84% means that 84% of the items changed significantly (.01) between the pre and post tests.

It can be noted that among the students, STEPS students exhibited the highest degree of change. STEPS students showed an 84% change as compared to the 52% change for the control group. This was significant at the .01 level.

The Career Life Planning Workshop facilitators also showed a high degree of change. They changed 76% for Fall, 80% for Winter and 88% for Spring.

The faculty workshops also show a high degree of change. The first workshop showed a 64% change and the second workshop showed a 72% change.

It should be noted that for the facilitators in the Career Life Planning Workshops and for the faculty workshops there was no specific control group of "other faculty members". However, since the faculty used in the Career Life Planning Workshop and the faculty workshop were representative of the faculty as a whole it is believed that the faculties pre test does represent a control group.

Attitude Index/Attitude Toward Women Survey results in terms of items that did change between pre and post tests for various groups.

Item	STEPS	Control Group	CLP Facilitator Fall	CLP Facilitator Winter	CLP Facilitator Spring	Faculty Workshop I	Faculty Workshop II
1	x	x	x	x	x	x	x
2	x	x	x		x		x
3	x	x	x		x		
4	x	x	x	x	x	x	x
5	x		x	x	x	x	x
6	x	x		x	x	x	x
7	x		x	x	x		x
8				x	x	x	x
9		x	x	x	x	x	x
10	x		x	x	x		x
11	x	x	x	x			x
12	x	x	x	x	x		x
13	x	x		x	x	x	x
14	x		x	x	x	x	
15			x		x		
16	x		x	x	x	x	
17	x			x		x	
18	x	x	x	x	*	x	x
19	x		x		*		x
20	x	x	x	x	*	x	
21	x		x	x		x	x
22	x			x	x	x	
23		x	x	x	x	x	x
24	x			x	x	x	x
25	x	x	x	x	x	x	x
TOTAL	84%	52%	76%	80%	88%	64%	72%

BSRI Questionnaire

This instrument treats masculinity and femininity as two independent dimensions rather than opposite ends of a single dimension. In so doing, it allows a person to say they are both masculine and feminine. There are 60 items on the BSRI: 20 of the items are masculine, 20 items are feminine and 20 items are neutral. The first item and then every third item thereafter are masculine, so that items 1, 4, 7, and 10 are masculine. The second item and every third item after that are feminine so that items 2, 5, 8, and 11 are feminine and the third item and every third after that are neutral. Appendix E shows the BSRI Questionnaire.

A data summary of the BSRI Questionnaire for STEPS students, control group, Career Life Plannings Workshop facilitators and faculty workshop indicated that of these groups a majority of items changed for all populations. However, the change exhibited by the STEPS students was not significant when compared to the control group.

In looking at a data summary of the BSRI for Career Life Planning Workshop facilitators a significant number of items did change for all three quarters of the workshop (62% for Fall, 65% for Winter, and 68% for Spring). A specific control group for the faculty was not used. However, since the facilitators were representations of the faculty as a whole this change does represent a significant change for each individual group.

In looking at a data summary of the BSRI for the faculty workshops a significant number of items did show change for each workshop; 54% for Group I and 62% for Group II. No specific control group was used; however, since the faculty members attending the workshop were representative of the faculty as a whole. This change does represent significant change for participants in each workshop.

Overall Evaluation, Conclusions and Recommendations

As a part of the STEPS TO SUCCESS Program, STEPS students were asked to complete an overall questionnaire in May, 1979. This questionnaire can be found in Appendix H . Here each STEPS student ranked the career advising, the Career Life Planning Workshops, the Career Research Seminar, the Career Resource Personnel Office, and finally, the math component. It can be noted by looking at Table 10 that the career advising was seen as most important. The next highest evaluation was given to the math component. The Career Life Planning Workshop was given the third highest evaluation. Both the Career Research Seminar and the Career Resource Personnel Office were given good ratings but not as high as the others. These were ranked fourth in order of importance for the students. Important to note here is that not all STEPS students were involved in the Career Research Seminar nor the Career Resource Personnel Office.

Table 10. Overall Evaluation Questionnaire Results

Program Component	Super	Good	Fair	Poor	Not Involved
Career Advising	31	37	6	9	1
Career Life Planning Workshops	10	32	23	7	14
Career Research Seminar	5	26	27	6	26
Career Resource Personnel Office	5	27	13	7	33
Mathematics Component	20	28	13	7	12

Chapter 5

DISCUSSION

The results of both the internal and external evaluation suggest that STEPS TO SUCCESS was a highly successful program, particularly as it related to students. Perusal of students comments about the program add an important dimension to the evaluation process. Through these comments one can see how the individualized, personalized approach was critical to the success of the program. Also important was the real contact with persons from the "world of work". Last but not least was the impact on faculty, particularly on faculty facilitators who stated that not only was the training and experience extremely beneficial but also that it would have a transfer effect to their career counseling and advising with students. Generally, Department Heads, and administrators found the two-day workshops quite beneficial to them personally and many hoped there would be more in the future.

Unfortunately there were some methodological problems which may lessen the generalizability of this model. One was the random group of General Studies students which served as the control group. Whereas STEPS students were volunteers, the control group was not. Another inhibiting factor was the lack of control groups for faculty facilitators and administrators.

Another problem is one of weeding out which segment of the program had most impact. Although students felt the "intrusive" advising (three times per quarter whether you wanted it or not) the staff felt it was the aggregate effects of the years total program which made the difference (i.e., Gain in GPA from Fall to Spring).

Although some may have difficulty with our concept of a one-year's committment to the program, we would do it again. We felt the continued contact was the critical factor in the programs's success. Also important here was the close collaboration between staff so that students didn't slip through a hole.

Clearly, the fact that approximately three-fourths of our final 85 students completed Math 100 . . . the key to the door for 57 curriculum options . . . was a STEP TO SUCCESS. There is no doubt that

many more will complete this in the future. We were, however, astounded at the number of students who had to go back to basic arithmetic skills if they were to succeed in college. Important to note is that with the "right" teacher and environment one can catch up! This does not mean any math teacher; it was extremely important to have a role model (in this case, female) who wanted to teach students math instead of teaching math to students!

It was also very helpful to have our advisor, who happened to be male, assist students in exploring traditional as well as non-traditional fields. At first the staff was somewhat uncomfortable with the concept of intrusive or aggressive advising; perhaps the best term would be assertive advising. Here we mean calling students on the phone and having them come in at least three times per quarter. There is no doubt about the success of this component!!! (See results section and appendix.) Here again, the kind of person was the critical factor.

There are a number of important questions that should be asked about this model:

1. Did students and faculty reduce their sex-role biases?
2. Where and how should this model be used? Are there some facets that are transferable to public and/or private higher education?
3. If one were to do this again, what would you change; what would you recommend?

Question #1 is somewhat difficult to answer because our test results were somewhat inconsistent. Students responses on the Attitude Towards Women Scale indictated there were significant liberalizing of their attitudes towards the rights and roles of women. However, the responses on the BSRI did not show significant pre-post differences. The BSRI and ATWS are very different kinds of instruments; one consists of adjectives describing personality factors while the other has statements regarding rights and roles of women. Clearly many students went into non-traditional fields but that was not seen as the goal of the program. Our goal was to provide opportunities for career information, counseling, and exploration. We wished to expand options for both male and female students so that they could make wiser, more informed choices.

With regards to the faculty facilitators and administrators, one can say that they learned a great deal and think others should have the opportunity to learn what they learned; a more important question is will they use it? Unfortunately, a one-year model program does not allow for determining the long range effects of the program. It is noteworthy that three workshops on sex-role stereotyping were sponsored by faculty who attended the workshops.

One major issue during the project was how do you get those faculty who need to go but who don't want to . . . to the faculty workshops. Even though both the President and Vice President (See Appendix I) signed the invitational letter sent to faculty regarding the workshops, a number of "targeted" faculty did not attend.

Possible suggestions for remediating this problem include:

1. Perusal contact with individuals who seem resistant to the workshop by those members (of the same sex) who have participated in previous workshops.
2. With regard to accomodations, allow people to choose their own roommates rather than assigning them. This may add to the already present anxiety regarding the workshop.
3. Work closer with the Deans; have the Deans request that certain faculty members/department heads attend the workshops.
4. Participation in staff and faculty development programs <u>should</u> be a criteria for promotion and/or pay increases.

Another question which should be asked is what facets recommend for institutions of higher education? There is no doubt this is an ideal program for a private or independent institution. It is student oriented and we have developed some ways to make it more cost effective. (See recommendations--STEPS II)

There are components of it which are also transferable to public insitutions. If faculty were given rewards for advising and student contact, the assertive advising model would be highly recommended. Faculty could also be trained to do career life planning workshops.

Math departments in both public and independent institutions could humanize their classes by hiring faculty who want to teach students math; too, faculty should be rewarded for this type of endeavor. In addition, math faculty should receive assistance in learning how to create learning environments where students will be willing to admit their gaps and work on them.

Finally, what would we change if we were funded for another year. We have developed a model for STEPS TO SUCCESS II and hope it provides assistance to those attempting to replicate our program.

Chapter 6

RECOMMENDATIONS - STEPS II

STEPS II - A Model Program in Career Education with Emphasis on Reduction of Sexual Stereotypes.

Target Population of Students

Freshmen and Sophomores in pre-major curricula (General Studies at Montana State University) and Letters and Sciences are logical candidates for this program. This is an expansion of the target group from General Studies students only.

Recruitment of Students

There is no substitute for personal contact with students in the recruitment process. This allows a representative of the program to individually meet with students to ascertain that they really do understand the program, its requirements and its services. Only when it is evident that the student has genuine intentions for and is fully willing to meet all expectations of the program, should enrollment be approved. This enrollment should be in the form of a written contract specifying each student's objectives and what will be done to meet these.

Posters, letters, announcements of all forms remain useful, but as adjuncts to the personalized effort.

It is an excellent idea to also inform parents of enrollees about the program to answer their questions and enlist their indirect support.

Too, some sort of social event should be scheduled early in the program year for enrollees and staff in order to help establish "espirit de corps" among the group.

Mathematics Component

Students must be enrolled in a mathematics course during their first quarter at the university. To do otherwise is to limit opportunities to help them and/or develop their full range of career options. This enrollment must be continued as a program requirement through at least intermediate algebra (Math 100 at MSU). Placement testing should remain the province of the mathematics department. However, results of this testing need to be available to advisors for discussion during the recruitment process.

Even where self-paced learning is the mode of instruction for mathematics courses (as it was for arithmetic, elementary algebra and intermediate algebra at MSU) formal classes/help sessions must be scheduled for the project's students. Attendance at these sessions needs to be a part of each students' contract.

The formal sessions can provide a schedule for not only explanation of course content, but also to increase motivation for and reduce anxiety in learning mathematics at all levels. This is especially important for students whose mathematics achievement levels are low, often due to attitudes about and experiences with this subject.

For a target the mathematics component needs to be led by a staff member with full faculty qualifications and identity. She/he must have adequate secretarial/clerical support along with the assistance of 2-3 qualified, interested graduate students. It is important that these graduate students have employment accountability to this program only.

The best physical facilities for this component would be two adjacent rooms located in mathematics instructional areas. One room could be used for formal class instruction, while the other for individual assistance to students. Full cooperation of the mathematics department in all these efforts is essential.

English Component (new)

We have added this component because just as women "can't do math"; male students "can't read or write"! Our experience has indicated this stereotype is quite prevalent among our college student population. "Women have good verbal skills . . . men have good quantitative ability."

Clearly, institutional support needs to be provided for those students, particularly male students, not prepared to achieve successfully in the basic freshman composition course. Placement into this course should be based on writing samples available and evaluated during the recruiting process.

Classes must be small (15-20 students per class), organized to provide both lecture and writing laboratory experiences. In addition, they need to be acceptable as credit toward the student's degree program even though they may not count for graduation.

Part-time faculty can be excellent sources of instructional help for this program component if and only if they are hired not only to meet classes but also to be available to provide individual assistance to students.

Advising Component

Advising of students must be intrusive, meeting with students for thorough academic and career guidance sessions well before they are inclined to "drop by" or are forced to seek help while registering for the next quarter.

The adviser(s) needs to be supported by adequate testing and psychological services, full student records and close communication with staff of the instructional components of the program. However, all of these must be ancillary to human communication skills with students inquiring about and listening to their interests and aspirations. Students then can be helped to translate these into goals, objectives and plans of action. The college/university experience is a time to

inquire, explore and grow both intellectually and personally. Students are likely to maximize this experience only when they have effective, concerned guidance.

Approximately 200-250 students are the largest group that should be assigned to any one adviser in this program. This assumes the adviser would plan to meet with each student not less than twice each quarter.

Career Resource Personnel Center

Though this program component lends itself to minimal staffing it would benefit a great deal from the energies of a full time staff member. The goal of combining student career interests with insights available from persons employed in difficult career fields lends itself to a variety of arrangements; i.e. conference telephone communications, field trips, weekends at work . . . perhaps limited only by the innovative capabilities and energies of the center staff and the students they serve.

Communication with faculty, other offices serving students and the students themselves needs to be a continual process not only to have students use the center but to time and integrate this use with their other career exploration efforts.

Course Component (new)

A program of this sort needs a central core, a source of both coherence and communication. This would be best provided by a "Supercourse" taught by program staff each quarter for a two hour period each week for two quarter credits. As part of their contracts with the program, students must be obligated to enroll in this course each quarter for an entire academic year.

Course content should emphasize strategies for survival/success in the college/university setting, study skills, career life planning and career awareness as well as means to overcome influences of sex

role stereotyping on career choices. Representatives from both the "world of work" and academic departments could serve as guest speakers about careers. Whenver possible these persons should be non-traditional role models i.e. the woman airplane pilot, the male nurse.

Course modules ought to be scheduled when they are of immediate interest to students. For example, sessions on study skills and test taking might be planned just before both mid-term and final examinations. A session on finding summer jobs might be scheduled just before spring vacation.

The course also could provide a vehicle for pre/post testing related to interests, study skills or attitudes and consequently be a source of information for overall program evaluation.

Sex-Role Stereotyping

Overcoming limitations consequent to sex-role stereotyping should be both an overt and covert goal of the program. For students, this awareness seems to be best provided in association with other program efforts, i.e. instruction, advising, the "Supercourse". Everything that is being done within the program needs to be examined to see if it can become, at least in part, a means to improve and expand student attitudes about themselves and their opportunities.

For faculty and staff the direct experiences of workshops confronting sex-role stereotyping issues should be offered, preferably with multiple workshops, to allow increased choices for faculty. Some faculty were so enthused by these workshops that they, on their own initiative, assumed leadership roles in organizing and facilitating similar experiences for their academic departments.

Other Miscellaneous Recommendations

Regular meetings of all program staff are a must. These meetings need not be long but they ought to be held on a weekly basis. We found it critical to our success!

In addition, whenever possible, anything a student fills out should be mark sensed/self scored. We permitted students to respond directly onto questionnaires (for their convenience and to reduce any inaccuracy. This then necessitated converting these data for the computer). The transcribing of data is a substantial cost that needs to be minimized in any way possible.

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APPENDIX A

Micellaneous Letters and Forms Regarding STEPS TO SUCCESS

Dissemination Activities

	Audience	Activity	Products Developed	Results
A.	Prospective Students	Recruitment	Application Form, "Flyer"	Recruitment quote exceeded
B.	Student Affairs & Services	Staff Meetings Staff Retreat	____	Close cooperation between STEPS and SAS programs
C.	Mathematics Staff	Staff Meetings	____	Resolution of problems within math programs
D.	Montana Extension Service	"Today's Youth Presentation"	____	Increased understanding of college student programs by extension agents
E.	Montana Career Educators	Career Education Conference	____	Increased understanding and awareness of STEPS TO SUCCESS Project
F.	MSU Career Education Task Force	Meeting	____	Discussion of Career Education Incentive Act and increased understanding of STEPS
G.	STEPS TO SUCCESS Advisory Board	Meeting	____	Understanding of and input into the program
H.	MSU College of Agriculture Advisers	Seminar	____	Exploration of STEPS TO SUCCESS Program and its results
I.	Faculty	Faculty Workshops	____	Some faculty who participated in workshops put two on for the Colleges of Education and Business
J.	Higher Education & Career Education Personnel	June, 1979	____	Informed educators regarding our program and its rusults.

" S T E P S " Registration Form

NAME _____

HOME ADDRESS _____

UNIVERSITY ADDRESS _____

SOCIAL SECURITY # _____

_____ Male
_____ Female

Year in School _____ Freshman _____ Junior _____ Sophomore _____ Senior

I have taken _____ SAT
_____ ACT
_____ None at this point

I am interested in taking the Career Life Planning Course in:

1st Choice (Check one)	2nd Choice (Check one)
_____ Fall	_____ Fall
_____ Winter	_____ Winter
_____ Spring	_____ Spring

I am interested in taking the following math course(s) this year. (Please check the appropriate place and circle the quarter when you anticipate taking the class.)

(Check)	(Circle)		
_____ Math 001 - Section 1	Fall	Winter	Spring
_____ Math 100 - Section 71	Fall	Winter	Spring
_____ Trigonometry	Fall	Winter	Spring
_____ Calculus	Fall	Winter	Spring
OTHER (List)			
____ _____	Fall	Winter	Spring
____ _____	Fall	Winter	Spring

Questions you have at this point

_____

_____

_____

_____

PLS:rkr

Please return to:

Student Affairs and Services

212 Montana Hall, MSU

Bozeman, MT 59715

160

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

September 28, 1978

Dear Student,

Please let me introduce myself. I have been employed to serve as adviser to STEPS students and bring you more than 20 years of teaching and advising experience. I am certain I can be of much help to you if you see me early each quarter and often. Please make an appointment for an individual visit with me as soon as you can by stopping by General Studies, 409 Reid Hall, or phoning 994-4371.

An important initial organizational meeting for STEPS students will be from 4:00 to 5:50 p.m. in Room 105, Reid Hall on Wednesday, October 4th OR Thursday, October 5th (your choice). In these meetings we will obtain some information about your personal and career interests and attitudes. These data will provide a substantial part of the foundation for your career guidance program.

We also are planning to be with you at the Career-Life Planning Workshop to be held during the Fall Quarter. The first session will be Wednesday evening, October 11 from 6:30 to 9:30 p.m. in the Hedges South main lobby. Subsequent sessions will be held at the same time and place each Wednesday through November 15.

We appreciate the extra time and effort you are investing in STEPS and are sure this involvement will meet your best expectations. We're especially looking forward to seeing you at EITHER the Wednesday or Thursday meeting.

Sincerely,

DR. JAMES S. DOLLIVER
Assistant Project Director
STEPS To Success

P.S. If you are unable to attend the six Career-Planning Workshop sessions Fall Quarter, please phone Debbie Arneson at 994-2826 before 5:00 p.m., Friday, October 6 1978.

JSD:da

TELEPHONE (406) 994 2826

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

Dear Parents of STEPS TO SUCCESS Students:

We are taking this opportunity to let you know about the STEPS TO SUCCESS program at Montana State University. Your son has joined this program in order to strengthen his understanding of career selection processes and improve his preparation for his eventual career choice. We also hope involvement in STEPS will encourage each student to be more imaginative and innovative in surveying career options and possible paths to them.

STEPS TO SUCCESS has three major components:

1. Career life planning workshops will help students become more aware of their capabilities and opportunities. They will learn means of making their own decisions about career choices.
2. STEPS students will enroll in at least one mathematics course. They will receive special help not only with their mathematics courses but also to increase their confidence about learning and using mathematics. Mathematics skills will permit students to consider many more career options.
3. Increased advising attention will let students discuss their developing career interests and help them translate these into effective curricular plans. We also expect to give each student extra assistance in improving study habits and skills.

We are looking forward to working with your son and trust his involvements in STEPS will contribute to his having a year that will be both enjoyable and worthwhile. If, at any time during this year, you have concerns, questions, suggestions or comments about the STEPS TO SUCCESS program and its impact on your son we certainly would appreciate your sharing them with us.

Sincerely,

Peggy Leiterman-Stock
Director of STEPS TO SUCCESS

James S. Dolliver
Assistant Director and Advisor

Deborah Gale
Mathematics

TELEPHONE (406) 994 2826

msu

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY. BOZEMAN 59717

January 1, 1978

Dear Student,

Welcome to the second quarter of STEPS! We are glad you are back at Montana State University and are sure you will continue to grow both academically and personally through your experiences here.

Another Career-Life Planning Workshop series will be available to help you learn more about yourself, career choice processes and opportunities in the world of work. These workshop sessions will be six Wednesday evenings from 5:30 to 8:30 p.m., January 10 through February14. Some of you signed up for the winter quarter series--please let us know if you plan to participate by returning the enclosed form in the brown envelope which has been supplied. Do this at once because space in this series may be limited.

STEPS students registered for Mathematics courses need to contact Deborah Gale in 101 Linfield Hall between 12:00 Noon and 3:00 p.m. Monday through Friday. She can help you get a good start in any Mathematics course you may have. Special mathematics sessions for persons in STEPS are scheduled from 3:00 p.m. to 4:00 p.m. either Monday and Wednesday in 134 Wilson Hall or Tuesday and Thursday in 452 Reid Hall.

If you have not yet registered for the Career Opportunities course please do so unless it conflicts with your other classes.

An advising appointment with me should be arranged by phoning 994-3532 not later than January 12th. I'd like to try to help you get the best start possible this quarter.

Hope you had a good vacation!

Sincerely yours,

DR. JAMES S. DOLLIVER
STEPS Advisor

JSD/da

Enclosures: 4

TELEPHONE (406) 994 2826

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

February 23, 1979

Dear Student,

We're very glad you are joining us for the third and final quarter of STEPS! This is when we intend to help you "tie everything together" on your way to academic and personal success at Montana State University.

The Career Life Planning workshop series for Spring Quarter will start Wednesday, April 4 from 5:30 to 8:30 P.M. continuing each Wednesday through May 9. This is the last opportunity for STEPS students to participate in the Career Life Planning series. Your continued participation in the STEPS program is dependent upon your participation in EACH of the three components: Advising, Math and Career Life Planning. PLEASE BE SURE TO ATTEND THIS IMPORTANT PROGRAM REQUIREMENT. Here you will learn more about yourself, career choice processes and opportunities in the world of work.

In addition, Mathematics help for all STEPS students will be available from 12:00 Noon to 3:00 P.M. in the locations dated on the included sheet. Special seminar sessions for STEPS students enrolled in Mathematics will meet either Mondays and Wednesdays or Tuesdays and Thursdays in these same places.

Please contact me for a Spring Quarter advising appointment by phoning 994-3532 as soon as you can after the start of classes.

Best of Luck with your final exams!

Sincerely,

DR. JAMES S. DOLLIVER
Advisor, STEPS TO SUCCESS

JSD/da
Enclosure: 1
2/23/79

TELEPHONE (406) 994 2826

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

Dear

The year has drawn to a close and we want to tell you how much we've enjoyed getting to know you. We hope that your participation in the "STEPS TO SUCCESS" program was meaningful and rewarding for you and that we provided assistance that was pertinent to you feeling "pretty good" about yourself and your accomplishments at Montana State University.

We think that the project aided us in discovering methods which will help others in their quest for successful career choices. Clearly none of this could have been possible without your interest, cooperation and energy.

We wish the very best for you and hope some day our paths will cross again. Have a marvelous summer!

Warmly,

Peggy L. Stock

Dr. Peggy Leiterman-Stock
Assistant Dean of Students
Director, Steps To Success

James S. Dolliver

Dr. James S. Dolliver
Assistant Director
Steps To Success

Deborah Gale

Dr. Deborah Gale
Math Director
Steps To Success

Debbie Arneson

Debbie Arneson
Administrative Assistant
Steps To Success

PLS/dja

TELEPHONE (406) 994 2826

APPENDIX B

1. Exhibit 2: Career Life Planning Student Evaluation
2. Exhibit 3: Facilitator Questionnaire
   Career Life Planning Workshops

Exhibit 2

CAREER LIFE PLANNING STUDENT EVALUATION

Fall, Winter, Spring

CAREER/LIFE PLANNING WORKSHOP SERIES

Participants: In order that an evaluation may be made of this program, we are requesting your assistance. Please complete this questionnaire by putting check marks in the appropriate blanks and also mark your answers on the computer sheets.

Name_____ Date_____

Age_____ Sex_____ Curriculum_____

1. The ideas and activities presented in this Career/Life Planning were:

   A. 17% Excellent
   B. 49% Very Good
   C. 29% Good
   D. 30% Fair
   E. 15% Poor

2. The objectives of the presentation were:

   A. 22% Excellent
   B. 38% Very Good
   C. 37% Good
   D. 3% Fair
   E. 0% Poor

3. I found the small group format of the workshop to be:

   A. 49% Excellent
   B. 37% Very Good
   C. 12% Good
   D. 2% Fair
   E. 0% Poor

4. The time involved and the schedule that was arranged was:

A. 5% Excellent

B. 21% Very Good

C. 43% Good

D. 31% Fair

E. 0% Poor

With regards to time format, I would suggest that:

		Yes	No
7.	There be fewer sessions	A. 16%	B. 84%
8.	There be more sessions	A. 21%	B. 79%
9.	The same amount of time but distributed differently	A. 50%	B. 5%
	If so how _____		
10.	Some sessions be held on Saturday	A. 6%	B. 93%
11.	One weekend format could be used (Fri. eve-Sun 5 PM)	A. 23%	B. 77%
12.	Mini-sessions be available through campus	A. 77%	B. 23%

13. In terms of learning about careers (career information) I found this workshop to be:

A. 11% Excellent

B. 35% Very Good

C. 43% Good

D. 9% Fair

E. 2% Poor

14. In terms of learning about myself, I found this workshop to be:

A. 22% Excellent

B. 50% Very Good

C. 22% Good

D. 6% Fair

E. 0% Poor

15. The work of the group facilitators was:

A. 40% Excellent

B. 41% Very Good

C. 11% Good

D. 4% Fair

E. 3% Poor

16. In the time permitted the coverage of the Career Life Planning Workshop Series was:

A. 16% Excellent

B. 41% Very Good

C. 28% Good

D. 13% Fair

E. 3% Poor

17. My attendance at this seminar should prove to me to be of:

A. 25% Very Beneficial

B. 50% Good Benefit

C. 20% Fair Benefit

D. 5% Poor Benefit

E. 0% No Benefit

18. Do you have a better idea of what kind of career you might want than you had when you began the Career Life Planning Workshop:

A. 74% Yes

B. 9% No

C. 16% About the same

19. Do you feel a need for more information on this topic?

A. 81% Yes

B. 19% No

20. Do you feel this workshop would be beneficial to others?

A. 97% Yes

B. 3% No

21. Do you think that college credit should be given for this project?

A. 69% Yes

B. 31% No

22. Overall, I consider this Career Life Planning Series:

A. 16% Excellent

B. 53% Very Good

C. 22% Good

D. 6% Fair

E. 3% Poor

23. Recommendations and comments: (write on this sheet)

24. How was this workshop similar or different from what you expected? (use the back of the sheet if necessary)

There have been a total of six (6) Career Life Planning Sessions. Please evaluate each session as follows:

SA - Strongly Agree
A - Agree
D - Disagree
SD - Strongly Disagree

Circle the one that fits you best.

"I found this session helpful to me with regards to the process of exploring alternatives regarding career choice."

		SA	A	D	SD
25.	Session I - Understanding Yourself	28%	60%	8%	2%
26.	Session II - Values and Goals	44%	51%	4%	0%
27.	Session III - Skills & Career Interests	46%	54%	0%	0%
28.	Session IV - Sex Role Stereotyping and Careers	25%	43%	23%	9%
29.	Session V - Meeting with Professionals	55%	36%	7%	0%
30.	Session VI - Goal Achievement Plan	37%	55%	6%	0%

Exhibit 3

FACILITATOR QUESTIONNAIRE

Career Life Planning Workshops

Fall, Winter, Spring

There have been a total of six (6) Career Life Planning Sessions. Please evaluate each session as follows:

SA - Strongly Agree D - Disagree

A - Agree SD - Strongly Disagree

Please circle one that fits you best.

1. "I found this session most helpful to my students and myself with regards to the process of exploring alternatives regarding career choice."

	SA	A	D	SD
a. Session I, Understanding Yourself	47%	47%	3%	3%
b. Session II, Values and Goals	31%	62%	3%	3%
c. Session III, Skills & Career Interests	47%	50%	3%	0%
d. Session IV, Sex-Role Stereotyping and Careers	50%	37%	13%	0%
e. Session V, Meeting with Professionals	22%	74%	3%	0%
f. Session VI, Goal Achievement Plan	62%	38%	0%	0%
2. I feel that the overall workshop was beneficial for the facilitator.	44%	53%	0%	0%
3. I feel that the workshop can modify career selection behavior.	38%	59%	3%	0%
4. I feel that I will be able to use this training later in my personal life.	45%	35%	19%	0%
5. I have seen a change in myself with regards to reduction of sexual stereotyping.	10%	48%	42%	0%

		SA	A	D	SD
6.	I have become aware of the language that I use with regards to sexual stereotyping (e.g. "mailman").	6%	71%	23%	0%
7.	I have learned more about my own interest skills and career choice by participating in the workshop.	29%	52%	19%	0%
8.	I feel that the training I received was excellent.	56%	44%	0%	0%
9.	I believe that the training will be very beneficial in the future.	31%	69%	0%	0%
10.	I feel that the training will help me to be a better adviser.	56%	44%	0%	0%
11.	I feel that the training has made me more aware of biases.	19%	50%	31%	0%
12.	I feel that I have learned more about myself on a personal level.	19%	63%	0%	0%
13.	I feel that I have learned more about my students.	40%	60%	0%	0%
14.	As a result of this workshop I have become more aware of my own career options.	25%	56%	19%	0%

With regards to time format for facilitator training and student sessions, I would suggest that:

		Yes	No
15.	There be fewer sessions.	46%	54%
16.	There be more sessions.	15%	85%
17.	The same amount of time but distributed differently.	68%	32%

If so, how?_____

_____

_____

18. In what specific way could the training for the workshops be changed? (Comments)

a. Session I, Understanding Yourself

b. Session II, Values and Goals

c. Session III, Skills and Career Interests

d. Session IV, Sex Role Stereotyping and Careers

e. Session V, Meeting with Professionals

f. Session VI, Goal Achievement Plan

Summary of Comments

1. Training was spread out over too much time.

2. Difficult to get the most benefit out of each exercise because there were too many exercises in each session. Suggested to limit the number of exercises in each session and going into more depth with a fewer number of exercises.

3. Provide individual facilitators more of an opportunity to role-play. Stay with the smaller groups throughout the training; this provided more feedback than the larger groups.

4. Have the director prepare the co-trainer of the routine before the training session. If refreshments are served, have an alternate to coffee.

5. Have single groups; receive materials before the sessions.

6. Avoid repetitive exercises. Use fewer, but longer sessions.

7. Less paperwork and more discussion.

APPENDIX C

Exhibit 4: Advising Questionnaire

Exhibit 4

DATE _____ QUARTER _____ MALE ____ FEMALE ____

Please share your opinion of the advising services you have just obtained so we might strengthen our sources of advising help for you and other students. We would appreciate your honesty --- no name is required. Thank you muchly!!!

Please check one or more responses to each of the following.

1. What were your reasons for seeking advising help?

___a. needed to plan my academic schedule
___b. needed to change my academic schedule
___c. had problems with my coursework
___d. had personal problems
___e. just wanted to talk
___f. advisor asked me to stop by
___g. had a specific question

2. The advisor's reaction to me:

___a. pleasant
___b. common
___c. unpleasant

3. During the advising sessions the advisor:

___a. listened to my concerns with understanding
___b. seemed really interested in me
___c. was difficult to understand
___d. rushed me
___e. took more time that I wanted to spend
___f. was able to see my problems and needs
___g. ignored what I was saying

4. When I needed specific information and/or opinions the advisor:

___a. was well informed
___b. if he didn't know, found out what I wanted to learn
___c. sent me away
___d. gave me poor information
___e. was able to comprehend what I was asking
___f. did not respond to what I asked
___g. provided the help I needed

5. Specific suggestions the advisor gave me were:

___a. clearly stated
___b. not difficult to carry out
___c. confusing
___d. difficult to accomplish
___e. related to my needs
___f. not important to me
___g. meaningful to me

6. Because of the advising help I have received at MSU I now:

___a. think more of myself
___b. think less of myself
___c. look at things differently
___d. have a better idea of where I am going
___e. am confused
___f. know a lot more than I used to
___g. have changed very little

7. In comparison with other advising I have received (high school or college) this advising was: (please check only one response)

___a. much better
___b. better
___c. about the same
___d. worse
___e. much worse

8. If I were to grade the advising services I have just obtained at MSU, the grade awarded would be: (please check only one response)

___a. A
___b. B
___c. C
___d. D
___e. F

9. Please feel free to add any other comments.

_____

_____

_____

_____

_____

APPENDIX D

Mathematics Component

~Montana State University~

Steps to Success Award

is presented to

_____

in recognition of your achievement
in Mathematics

_____ president

_____ advisor

_____ program director

~June 1979~

_____ subject director

APPENDIX E

Instrumentation

1. Exhibit 7: Attitude Index
2. Exhibit 8: BSRI
3. Exhibit 9: Self-Concept Scale
4. Exhibit 10: Attitude Scale
5. Facilitator Questionnaire-Career Life Planning Workshops

Exhibit 7

ATTITUDE INDEX

Instructions

The statements listed below describe attitudes toward the role of woman in society that different people have. There are no right or wrong answers, only opinions. You are asked to express your feeling about each statement by indicating whether you: A. agree strongly (AS), B. agree mildly (AM), C. disagree mildly (DM), or D. disagree strongly (DS). Please indicate your opinion by circling either A. (AS) agree strongly, B. (AM) agree mildly, C. (DM) disagree mildly, or D. (DS) disagree strongly on the questionnaire sheet itself.

1. Swearing and obscenity are more repulsive in the speech of a woman than a man.

   A. AS B. AM C. DM D. DS

2. Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day.

   A. AS B. AM C. DM D. DS

3. Both husband and wife should be allowed the same grounds for divorce.

   A. AS B. AM C. DM D. DS

4. Telling dirty jokes should be mostly a masculine prerogative.

   A. AS B. AM C. DM D. DS

5. Intoxication among women is worse than intoxication among men.

   A. AS B. AM C. DM D. DS

6. Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing the laundry.

   A. AS B. AM C. DM D. DS

7. It is insulting to women to have the "obey" clause remain in the marriage service.

   A. AS B. AM C. DM D. DS

8. There should be a strict merit system in job appointment and promotion without regard to sex.

   A. AS B. AM C. DM D. DS

9. A woman should be as free as a man to propose marriage.

   A. AS B. AM C. DM D. DS

10. Women should worry less about their rights and more about becoming good wives and mothers.

A. AS B. AM C. DM D. DS

11. Women earning as much as their dates should bear equally the expense when they go out together.

A. AS B. AM C. DM D. DS

12. Women should assume their rightful place in business and all the professions along with men.

A. AS B. AM C. DM D. DS

13. A woman should not expect to go to exactly the same places or to have quite the same freedom of action as a man.

A. AS B. AM C. DM D. DS

14. Sons in a family should be given more encouragement to go to college than daughters.

A. AS B. AM C. DM D. DS

15. It is ridiculous for a woman to run a locomotive and for a man to to darn socks.

A. AS B. AM C. DM D. DS

16. In general, the father should have greater authority than the mother in the bringing up of children.

A. AS B. AM C. DM D. DS

17. Women should be encouraged not ot become sexually intimate with anyone before marriage, even their fiances.

A. AS B. AM C. DM D. DS

18. The husband should not be favored by law over the wife in the disposal of family property or income.

A. AS B. AM C. DM D. DS

19. Women should be concerned with their duties of childbearing and house tending, rather than with desires for professional and business careers.

A. AS B. AM C. DM D. DS

20. The intellectual leadership of a community should be largely in the hands of men.

A. AS B. AM C. DM D. DS

21. Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set up by men.

A. AS B. AM C. DM D. DS

22. On the average, women should be regarded as less capable of contributing to economic production than are men.

A. AS B. AM C. DM D. DS

23. There are many jobs in which men should be given preference over women in being hired or promoted.

A. AS B. AM C. DM D. DS

24. Women should be given equal opportunity with men for apprenticeship in the various trades.

A. AS B. AM C. DM D. DS

25. The modern girl is entitled to the same freedom from regulation and control that is given to the modern boy.

A. AS B. AM C. DM D. DS

NAME_____ SEX: M F DATE_____

Exhibit 8

BSRI

In this inventory, you will be presented with sixty personality characteristics. You are to use those characteristics in order to describe yourself. That is, you are to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

Example: ____Sly

Mark a *1* if it is *never or almost never true* that you are sly.
Mark a *2* if it is *usually not true* that you are sly.
Mark a *3* if it is *sometimes but infrequently true* that you are sly.
Mark a *4* if it is *occasionally true* that you are sly.
Mark a *5* if it is *often true* that you are sly.
Mark a *6* if it is *usually true* that you are sly.
Mark a *7* if it is *always or almost always true* that you are sly.

Thus, if you feel it is *sometimes but infrequently true* that you are "sly," *never true* that you are "malicious," *always or almost always true* that you are "irresponsible," and *often true* that you are "carefree," you would rate these characteristics as follows:

3 Sly	7 Irresponsible
1 Malicious	5 Carefree

____ 1. Self-reliant	____14. Flatterable
____ 2. Yielding	____15. Happy
____ 3. Helpful	____16. Has strong personality
____ 4. Defends own beliefs	____17. Loyal
____ 5. Cheerful	____18. Unpredictable
____ 6. Moody	____19. Forceful
____ 7. Independent	____20. Feminine
____ 8. Shy	____21. Reliable
____ 9. Conscientious	____22. Analytical
____10. Athletic	____23. Sympathetic
____11. Affectionate	____24. Jealous
____12. Theatrical	____25. Has leadership abilities
____13. Assertive	____26. Sensitive to the needs of others

1	2	3	4	5	6	7
Never or Almost Never True	Usually Not True	Sometimes But Infrequently	Occasionally True	Often True	Usually True	Always or Almost Always True

____27.	Truthful	____44.	Tender
____28.	Willing to take risks	____45.	Friendly
____29.	Understanding	____46.	Aggressive
____30.	Secretive	____47.	Gullible
____31.	Makes decisions easily	____48.	Inefficient
____32.	Compassionate	____49.	Acts as a leader
____33.	Sincere	____50.	Childlike
____34.	Self-sufficient	____51.	Adaptable
____35.	Eager to soothe hurt feelings	____52.	Individualistic
____36.	Conceited	____53.	Does not use harsh language
____37.	Dominant	____54.	Unsystematic
____38.	Soft-spoken	____55.	Competitive
____39.	Likable	____56.	Loves children
____40.	Masculine	____57.	Tactful
____41.	Warm	____58.	Ambitious
____42.	Solemn	____59.	Gentle
____43.	Willing to take a stand	____60.	Conventional

Exhibit 9

SELF-CONCEPT

This is a study of the Self-Concept. There are no wrong or right answers. We are interested in the answer that best fits you personally.

Below is a list of ten items which discuss how you feel about your self. Please study each item carefully and on this sheet, circle the number of the answer which best fits you.

Items

1. I feel that I'm a person of worth, at least on an equal plane with others.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

2. I feel that I have a number of good qualities.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

3. All in all, I am inclined to feel that I am a failure.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

4. I am able to do things as well as most other people.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

5. I feel I do not have much to be proud of.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

6. I take a positive attitude toward myself.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

7. On the whole, I am satisfied with myself.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

8. I wish I could have more respect for myself.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

9. I certainly feel useless at times.

   1. Strongly agree
   2. Agree
   3. Disagree
   4. Strongly disagree

10. At times I think I am no good at all.

    1. Strongly agree
    2. Agree
    3. Disagree
    4. Strongly disagree

Name_____ Sex_____ Date_____

Exhibit 10

NAME_____ SEX (M)___ (F)___ DATE_____

ATTITUDE SCALE

DIRECTIONS

Following are a number of statements about career choice. Career choice means the kind of job or work which you think you will probably be doing when you have finished all of your schooling.

Read the statements.
If you agree or mostly agree with the statement circle the T.
If you disagree or mostly disagree with the statement circle the F.

1. T F Once you choose a job, you can't choose another one.

2. T F In order to choose a job, you need to know what kind of person you are.

3. T F I plan to follow the line of work my parents suggest.

4. T F I guess everybody has to go to work sooner or later, but I don't look forward to it.

5. T F A person can do any kind of work he wants as long as he tries hard.

6. T F I'm not going to worry about choosing an occupation until I'm out of school.

7. T F Your job is important because it determines how much you can earn.

8. T F Work is worthwhile mainly because it lets you buy the things you want.

9. T F The greatest appeal of a job to me is the opportunity it provides for getting ahead.

10. T F I often daydream about what I want to be, but I really haven't chosen a line of work yet.

11. T F Knowing what you are good at is more important than knowing what you like in choosing an occupation.

12. T F Your parents probably know better than anybody else which occupation you should enter.

13. T F If I can just help others in my work, I'll be happy.

14. T F Work is dull and unpleasant.

15. T F Everyone seems to tell me something different; as a result I don't know which kind of work to choose.

16. T F I don't know how to go about getting into the kind of work I want to do.

17. T F There is no point deciding on a job when the future is so uncertain.

18. T F I spend a lot of time wishing I could do work I know I can never do.

19. T F I don't know what courses I should take in school.

20. T F It's probably just as easy to be successful in one occupation as it is in another.

21. T F By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.

22. T F There are so many things to consider in choosing an occupation, it is hard to make a decision.

23. T F I seldom think about the job I want to enter.

24. T F It doesn't matter which job you choose as long as it pays well.

25. T F You can't go very far wrong by following your parents' advice about which job to choose.

26. T F Working is much like going to school.

27. T F I am having difficulty in preparing myself for the work I want to do.

28. T F I know very little about the requirements of jobs.

29. T F The job I choose has to give me plenty of freedom to do what I want.

30. T F The best thing to do is to try out several jobs, and then choose the one you like best.

31. T F There is only one occupation for each person.

32. T F Whether you are interested in a particular kind of work is not as important as whether you can do it.

33. T F I can't understand how some people can be so certain about what they want to do.

34. T F As long as I can remember, I've known what kind of work I want to do.

35. T F I want to really accomplish something in my work - to make a great discovery or earn a lot of money or help a great number of people.

36. T F You get into an occupation mostly by chance.

37. T F It's who you know, not what you know, that's important in a job.

38. T F When it comes to choosing a job, I'll make up my own mind.

39. T F You should choose an occupation which gives you a chance to help others.

40. T F When I am trying to study, I often find myself daydreaming about what it will be like when I start working.

41. T F I have little or no idea of what working will be like.

42. T F You should choose an occupation, then plan how to enter it.

43. T F I really can't find any work that has much appeal to me.

44. T F You should choose a job in which you can someday become famous.

45. T F If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.

46. T F You should choose a job which allows you to do what you believe in.

47. T F The most important part of work is the pleasure which comes from doing it.

48. T F I keep chancing my occupational choice.

49. T F As far as choosing an occupation is concerned, something will come along sooner or later.

50. T F I am not going to worry about choosing a job since you don't have anything to say about it anyway.

FACILITATOR QUESTIONNAIRE

CAREER LIFE PLANNING WORKSHOP

There have been a total of six (6) Career Life Planning Sessions. Please evaluate each session as follows:

SA - Strongly agree

A - Agree

D - Disagree

SD - Strongly disagree

Circle one that fits you best.

1. "I found this session most helpful to my students and myself with regards to the process of exploring alternatives regarding career choice."

a. Session I, Understanding Yourself	SA	A	D	SD
b. Session II, Values and Goals	SA	A	D	SD
c. Session III, Skills & Career Interests	SA	A	D	SD
d. Session IV, Sex Role Stereotyping and Careers	SA	A	D	SD
e. Session V, Meeting with Professionals	SA	A	D	SD
f. Session VI, Goal Achievement Plan	SA	A	D	SD

2. I feel that the overall workshop was beneficial for the students	SA	A	D	SD
3. I feel that the quality of training that I received was adequate	SA	A	D	SD
4. I feel that I will be able to use this training later in advising activities	SA	A	D	SD
5. I have seen a change in myself with regards to reduction of sexual stereotyping	SA	A	D	SD
6. I have become aware of the language that I use with regards to sexual stereotyping (eg. "mailman")	SA	A	D	SD
7. I have learned more about my own interest skills and career choice by participating in the workshop	SA	A	D	SD

With regards to time format for facilitator training and student sessions, I would suggest that:

	YES	NO
8. There be fewer sessions	_____	_____
9. There be more sessions	_____	_____
10. The same amount of time but distributed differently	_____	_____

If so, how? _____

_____

_____

11. In what specific way could the workshops be changed? (Comments)

APPENDIX F

Overall Evaluation Questionnaire Results and Comments

OVERALL EVALUATION QUESTIONNAIRE

We would appreciate your letting us know how different components of the STEPS TO SUCCESS program were valued by you. Please rank (1-5) the items below in order of their usefulness to you. In addition, circle the work that best describes the quality of the experience you had with the program.

Program Component	Ranking	Quality of Experience				
A. Career Advising	1	Super 31	Good 37	Fair 6	Poor 9	No Involvement 1
B. Career Life Planning Workshop	3	Super 10	Good 32	Fair 23	Poor 7	No Involvement 14
C. Career Research Seminar	4	Super 5	Good 26	Fair 27	Poor 6	No Involvement 26
D. Career Resource Personnel Office	4	Super 5	Good 27	Fair 13	Poor 7	No Involvement 33
E. Mathematics Component	2	Super 20	Good 28	Fair 13	Poor 7	No Involvement 12

PLEASE COMMENT!!

How might we strengthen this program to better help MSU students?

COMMENTS: OVERALL EVALUATION QUESTIONNAIRE

1. I enjoyed the Career Life Planning Workshops. I feel it really helped me to understand myself better. I feel that there should be more of them. The math is what helped me the most. I feel that it should be continued.

2. I feel that the program is fairly strong and do not suggest any change.

3. I think the Math Department should be changed just a bit. It's hard to work on something that requires your own discipline. Some are able to do this, but what about us who can't?

4. It was an excellent program with terrific advisors! Advertise the program more to let more persons know about it. Perhaps send a description of the program to all upcoming freshmen who are in General Studies, so they are aware the program is available.

5. Nothing that I can think of.

6. I think that the programs offered are good, but I just don't take advantage of them enough.

7. If it weren't for Deborah Gale and the Math program, I am positive that I wouldn't be as successful in my mathematical studies as I am now. Jim Dolliver has been a fantastic advisor! Between Jim and Deborah, I have gained the confidence and positive attitude to succeed in college. They have set me in the right direction and I am most grateful to them and any one else involved. The Career Research Class was boring, but I haven't any idea on how to make it better. I would really like to thank all the caring people who are involved in making the STEPS program a success! I believe it really has been a success. Thank you all very much, you're wonderful!!

8. I feel that the student has an important choice to make, and often doesn't realize it's importance. All the department can do is give him a fair warning and be ready to answer his questions. Which is what you do now.

9. Maybe have the class at another time block. This program helped me think alot about my values, desires, achievements, and dreams with encouragement only!!

10. Just keep on keepin' on!

11. Better explanation of the program may help students understand the purpose of the program.

12. Cut the time per session for the Career Planning Workshop.

13. Strengthen or advocate the career part of talking to someone in that field--gives a better idea of actual day-to-day job. A lot of repetition in worksheets, too much filling out of sheets. Could have been more discussion, movies good. Workshop presented many aspects of career division (sex-roles, environment, etc.)

14. I didn't attend either B or C but I think the program really helped me see where I was going. I can't think of what could help because the program seems to be doing me good so that's all that counts. I got the info I needed.

15. I believe the Resource Personnel Office in Montana Hall should be emphasized more and expanded, if feasible. My experiences with it were great and I really benefitted.

16. Too much repetition in exercises. We kept filling out sheets that asked the same things over and over again. We didn't really learn a lot about different careers, only where our interests lie.

17. Stress career planning more, have more set up workshops for students to talk to people in various fields. Have the program set up definite job-shadowing appointments. Please keep the math component--it saved me--Deborah was great!

18. Since I wasn't involved in the Career Research Classs, beacause of scheduling conflicts, but it certainly sounds like a good idea. I don't know how to improve it, but it really didn't work for me. Also, the Career Resource Personnel Office needs to be better organized and to have more people on file to talk to. The STEPS Math Class and Career Advising are clearly first-rate. It would be nice if there were more advanced STEPS math classes.

19. I think the Career Research Class was kind of good, but if you take Career Life Planning Workshops it is kind of a waste because we can talk to the people of our choice on a one-to-one basis in the workshop.

20. Let them know before they start that it will take their time, but that you will help them to learn from it. Provide more chances to talk with people in different occupations.

21. Help the student search for what he or she would like to go into. A more personal approach.

22. Go on students needs for Career Planning Workshops, if not needed or wanted. No stress on math component.

23. Good help in math department. Advisor cared!!

24. Bring the students to the different fields of study, instead of bringing the professionals to the students.

25. I really enjoyed and benefitted from the programs I attended. Maybe there should be a little more encouragement for those, like me, who are not as inclined to leap into things.

26. I think that this program is very good. I've had many chances to view different aspects of career choices. Maybe to better the program, the students could also do more individual work on looking for a career that they would want to pursue.

27. The night we discussed roles of males and females in society was almost a total waste because it is already discussed and rediscussed so much nowadays. If it were replaced by maybe testing of our interests or something like that I think it would be more useful.

28. Don't limit them to freshmen or General Studies students. Give a credit, especially to those lasting more than two hours a week.

29. Don't make the workshops so long, they get boring. I like the way the math workshops are set up. They give everyone an equal chance.

30. Our group in Career Life Planning went really well, but I think it's very important in these groups to be sure people talked alot.

31. I was really satisfied with the program. The only exception there might be is that I found a few of the Career Life Planning Workshops and several of the Career Research classes boring (but useful).

32. To me it seemed like the career class and the workshop seemed to repeat a lot of the information. The thing I didn't like about the math was it was sometimes hard to find out what was going on from quarter to quarter and things were always changing, like the hours of the testing center.

33. Since I didn't participate in the Career Life Planning I can't say much about that, but the Math & Career advising were good. The advisor was very encouraging for classes that I wanted to take and was always helpful when I had trouble.

34. I believe the program was, for the most part, super; and also, that a student will get out of the program opportunities what he or she puts into it.

35. Keep students involved.

36. I don't think you should have the Career Life Planning Workshop sessions so long and some of the things we had to do in them were silly. I also think that Algebra 100 should be in a classroom with an instructor.

37. Concentrate more on the workshops and what the students really want to do in life.

38. Make the Career Research class more interesting. How? Got me, but it was rather boring.

39. The Math Department could stand some improvement. The advising has been great! Workshops have helped a lot.

40. The Career Life Planning Workshop was kind of long and it didn't help me too much.

41. The program is great . . . just keep it the way it is!

42. I think the math should be in a classroom with lectures, I don't like going at your own pace. I would benefit more from teachers explaining and then going for extra help if I needed it. I would understand and work at it better.

43. I feel like I wasted a lot of time.

44. I think the Math Learning Center is great! It has helped me very much and I hope they continue it as well as start learning centers in other things (science).

45. This series helped me understand where I am and the direction I'm heading for.

46. For the Career Research Class you might want to ask students where their interest lie instead of getting speakers from every area in the University.

47. Career workshops are a wonderful thing but you don't realize until after the classes are over. The help in math is great. Deborah Gale really has some great ideas, and is an awful lot of help in any math.

48. The Life Planning Workshops are too long, therefore causing a loss of interest. In math, Deborah Gale was really great, but the Math Department stinks. I don't think you should have to pass a test with a "C" before you can go on -- and their whole whole system. All in all, I think STEPS is a worthwhile project.

49. Publicize the Career Life Planning workshops more and open them up to everyone interested.

50. Make available more information on how to consult professionals whose job one might be interested in.

51. No individual math for students who wish to have a lecturer. I'm sure at least one or two Math 100 classes could be held with a lecturer. Some of us need to be taught math, it doesn't come through a book with instructions.

APPENDIX G

Letters, Forms, and Other Relevant Material
Regarding Fairmont Hot Springs Faculty Workshops

MSU

OFFICE OF THE PRESIDENT

MONTANA STATE UNIVERSITY BOZEMAN 59717

March 19, 1979

Dear Colleague,

Montana State University has been fortunate enough to receive an HEW grant for an experimental program designed to determine and modify attitudes and behavioral patterns involved in sex role stereotyping and sex bias in vocational choice. This is an area of considerable national interest, with important local implications. Although there is a strong tendency to disclaim personal tendencies to bias and stereotype, all the evidence is to the contrary. Such evidence suggests that we react in a way that inhibits our acceptance of the non-traditional status of the sexes. In order to help understand this problem, the HEW people have provided funding for a workshop; we encourage each recipient of this letter to participate in the program, both for your own and the corporate benefit of MSU. In view of the high esteem in which your colleagues hold you, we are inviting you to attend this workshop in order that you might both learn from the experience and share new information with your peers when you return to campus. The leaders of the retreat come to us with outstanding credentials and reputations (vitas attached). Additionally, you will be able to enjoy a pleasant two days at Fairmont Hot Springs, all costs defrayed by the project (personal liquor bills excepted).

The retreat will be held Wednesday, April 18, 1979 from 9:00 AM through Thursday, April 19 at 4:00 PM. You are invited to check in Tuesday afternoon or evening if you wish.

We cannot urge you strongly enough to give this workshop top priority in your schedule. Please call the President's Office (Extension 2341) and return the enclosed form regarding your intentions to attend no later than 5:00 PM, March 30. Should you have any specific questions regarding the workshop, you may contact Dr. Peggy Leiterman-Stock in Student Affairs, Extension 2826.

Sincerely,

William J. Tietz
President

Stuart E. Knapp
Vice President for Academic Affairs

186

PLS/da
Enclosures

TELEPHONE (406)994 2341

202

msu

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

April 10, 1979

Dear Colleague;

I am very pleased you have chosen to be with us at Fairmont Hot Springs on April 18 & 19. Enclosed you will find a list of other persons who are attending this same workshop. I encourage you to arrange rides to and from Fairmont by calling others on this list.

Arrangements have been made with Fairmont for your room reservation which you will be sharing with another person. You will not have to pay for your room or meals while at Fairmont; however, any "recreational" or "attitude adjustment" tabs will have to be picked up by you.

The workshops will begin at 9:00 AM each day and terminate at 5:00 PM both days. Supper will be served at 7:00 PM the first day.

For those of you choosing to drive up the morning of the workshop, rather than arriving the night before, it takes two (2) hours each way from Bozeman to the Fairmont Hot Springs itself. We will be starting promptly at 9:00 AM so be sure to give yourself enough time.

I look forward to getting to know you and sharing a meaningful learning experience with you. Should you have any questions, please do not hesitate to contact me (x2826). See you next week!

Sincerely,

Peggy L. Stock

Peggy Leiterman-Stock
Director, Steps To Success
Assistant Dean of Students

PLS/dja

Enclosures: 3

cc: President Tietz
Sunny Hansen
Thomas Skovholt
Fairmont Hot Springs

TELEPHONE (406) 994-2826

MSU DEPARTMENT OF HEALTH, PHYSICAL EDUCATION & RECREATION

COLLEGE OF EDUCATION MONTANA STATE UNIVERSITY, BOZEMAN 59717

RECEIVED
APR 26 1979
STUDENT AFFAIRS and SERVICES
MONTANA STATE UNIV.

April 24, 1979

Dr. Peggy Leiterman-Stock
Student Affairs and Services
Montana Hall
Campus

Dear Peggy:

The Fairmont workshop proved for me to be the most stimulating professional conference I have attended within the past 10 years while at MSU.

The content and quality of the workshop is encouraging as hopefully this mirrors the trend in the character of the atmosphere promoted by the new leaders on this campus.

Thank you for inviting me.

Sincerely,

Bette

Bette A. Lowery, Ed.D.
Associate Professor
Health, Physical Education
and Recreation

BAL/cs

Enc.

TELEPHONE (406) 994 4001

—Montana State University— Department of Biology, May 5, 1979
Bozeman, Montana 59715 Tel. (406) 994-0211

Dr. Peggy-Leiterman Stock
Student Affairs
Montana State University
Bozeman, Montana

Dear Peggy:

The experience we shared while attending the recent workshop on Sex Bias at Fairmont Hot Springs was indeed worthwhile for me and I want to thank you for your contribution toward establishing better faculty understanding at Montana State by making this workshop possible.

In addition to the legal problem which developed here out of sex bias on the part of administrators, there is still much evidence of discriminatory attitudes on our campus. While attending a two-day workshop is not likely to bring about immediate change, it is at the least an essential beginning for establishing new patterns of communication among the male and female faculty across inter-departmental boundaries.

It occurs to me that using this kind of "workshop technique" as a method of "group therapy", one might similarly be able to work through long-standing interpersonal communication problems within departments where there have traditionally been poor relationships based on poor attitudes. It you would like to undertake a challenge like the Biology Deparment, I would be glad to co-author a proposal to fund the series. It might be a winning experiment.

Many thanks for including me among the guests at Fairmont. Congratulations on your most recent success in receiving the ACE fellowship for next year. I hope that it will be a rewarding experience. Best wishes.

Sincerely,

Saralee

Saralee N. Visscher
Professor of Entomology

FACULTY WORKSHOP DATA

GROWING UP FEMALE, I LEARNED THAT I SHOULD . . .

a. not be smart around men
b. stay home with my children
c. be polite and pretty
d. have big boobs
e. learn to get my way with men
f. not depend on a man for a living
g. not trust men
h. make the most of (i.e. use) my physical beauty
i. not fight with boys
j. expect that men will take care of me
k. not have stray sexual feelings
l. not have stray ambitions
m. be passive
n. not be interested or lust after mens' bodies
o. emphasize my social rather than my academic skills
p. provide a suitable home
q. not be independent
r. let the man handle the crisis
s. not be mechanical
t. know that it's easy to fall in love with a rich guy
u. always look my best
v. not go out with younger men
w. be a virgin at marriage (even your 2nd and 3rd over)
x. counted the limits of sex
y. not have aspirations
z. be submissive and good sexually
aa. never swear

GROWING UP MALE, I LEARNED THAT I SHOULD . . .

a. not show too much affection
b. not do particular jobs e.g., clearing dishes, babysitting
c. learn responsibility through specific types of male tasks
   - care and operation of machines
   - family (empty garbage, mow grass, house repairs)
   - athletics (teamwork) -- importance of training and promptness
   - aspire to high elected or achieved positions (e.g. president, vice-president)

MY SON HAS LEARNED THAT HE SHOULD . . .

a. be comfortable with being a male
b. control or not show emotions
c. should play sports

MY SON LEARNED THAT HE SHOULD . . . (cont.)

d. should not worry about participation in organized sports
e. should expect to be a bread winner
f. develop a positive attitude
g. consider females emotionally inferior
h. should not "punch out" his sister
i. treat women with politeness and respect
j. not allow himself to be pushed around
k. protect women
l. carry on family business
m. carry on family name
n. hunt and fish

MY DAUGHTER HAS LEARNED THAT SHE SHOULD . . .

a. listen
b. help
c. be nice/neat
d. be responsible for both self and men's behaviors
   e.g. on dates, in public--set the tone
e. be a mother
f. be a good cook (and like it)
g. look after parents
h. do well in school-especially early grades
i. take responsibility for "social" functions
   (e.g. thank you notes, Christmas cards, etc.)
j. submit to males-except sexually ("save" herself for the right man)
k. be self sacrificing for a "greater good"
l. not be tough
m. be a lady (e.g. don't talk loud, don't swear, don't be sexually aggressive, don't be physically active, dress neatly, use good posture, dress appropriately seductive.)
n. be nurturant
o. not to be adventurous or risk taking
p. be dependent/accept protection
q. select an appropriate career (e.g. "service careers", volunteer)
r. please males
s. be conscientious
t. be in love
u. show emotions

SEX ROLE MESSAGES THAT MALE STUDENTS BRING US

a. that there is no problem
b. that males make decisions--that males are "the decision makers", not women

SEX ROLE MESSAGES THAT MALE STUDENTS BRING TO US (cont.)

c. boys will be boys, girls will be girls
d. males primary financial responsibility, women will follow
e. Montana macho image--hunting and drinking
f. Men should guard emotions and feelings; they should not talk about feelings; not aware of feelings
g. patronizing attitude toward women; be a gentleman
h. double standard in roles; women can do male jobs; men cannot do women's jobs

SEX ROLE MESSAGES FEMALE STUDENTS BRING TO US

Verbal

a. lack of resources available to females (athletic facilities, time, financial)
b. offices (secretary) in organizations
c. student employment
d. student transport
e. see authoritative positions occupied by males
f. attempts to equalize opportunities

Non-Verbal

a. lack of attention and common courtesies

INSTITUTIONAL FACILITATORS

1. special counseling services for women
2. up-to-date encouraging accl: educational information
3. opportunities for internships, "hands-on" experiences
4. systematic career development program
5. workshops on sex bias and sex role stereotyping
6. enlightened "faculty"
7. special programs for women (math anxiety, career planning workshops, consciousness raising groups, support groups)
8. skill building workshops (job-seeking skills, assertiveness training)
9. obtaining grants to promote career/life planning for both women and men
10. flexible programs
11. seminars and courses (credit and no credit) for women, about women, about women and work
12. courses on sex role socialization and changing sex roles
13. social activism (day care centers, advocates, health care)

INSTITUTIONAL INHIBITORS

1. sex biased tests and inventories
2. use of texts and curriculum materials which are sex biased (and race biased)
3. faculty discouragement in advising role
4. lack of encouragement by mentors, both male and female
5. faculty sexist attitudes in classroom (both conscious and unconscious)
6. inflexibility of requirements (curriculum, library, etc.)
7. sexist counselors and placement offices and recruitors
8. lack of appropriate role models in faculty and administrative ranks
9. less financial aid (e.g. fewer assistantships) for female students (from parents and institution)
10. eligibility requirements of full-time enrollment
11. requirement of full-time enrollment in graduate program
12. inaccurate, inadequate, sexist, vocational information
13. admissions to professional and technical programs (very difficult to document overt discrimination
14. lack of opportunity for "hand-on" experience, internships
15. lack of support network for female students admitted to nontraditional programs

CAREER-RELATED SEX-ROLE STEREOTYPING OUR GOALS

1. Increase awareness of your own career socialization
2. Increase awareness of sex-role stereotyping in higher education--impact on students, faculty, staff
3. Increase commitment to personal and/or institutional change

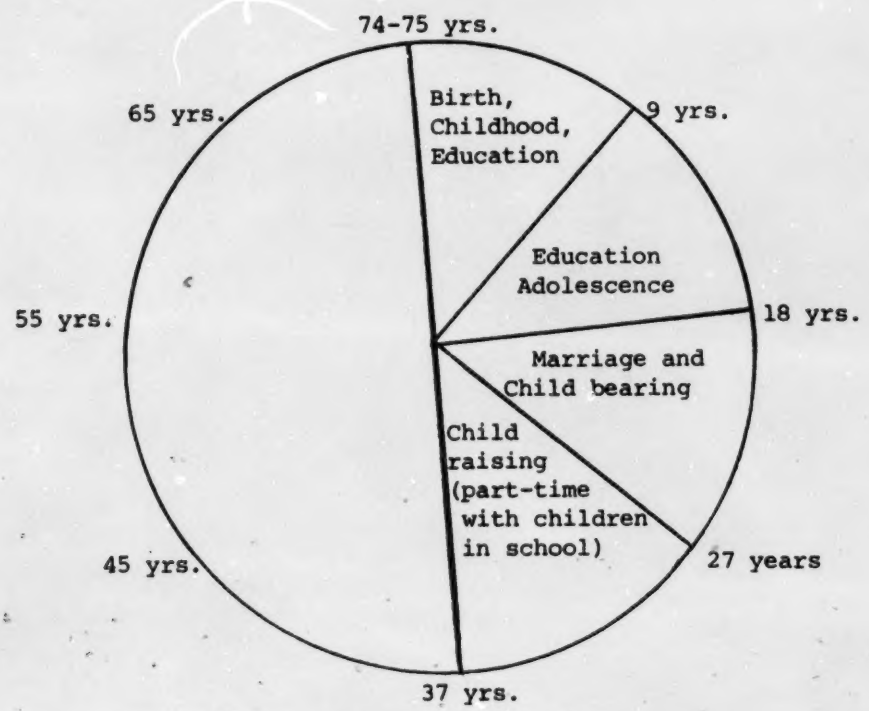
INSTITUTIONAL INHIBITORS/FACILITATORS

Inhibiting (Restraining Forces)

5
4
3
2
Status 1
Quo 1
2
3
4
5

Facilitating (Driving Forces)

TRADITIONAL WOMEN'S LIVES
(Life Stages)



CAREER RELATED SEX-ROLE STEREOTYPING (CRSRS)

Workshop Goals

1. increase my own awareness of my own career socialization (attitudes and behaviors)
2. increase awareness of CRSRS in higher education--impact on students, faculty, staff
3. increase commitment to personal and/or institutional change
4. interact in meaningful ways with other MSU faculty
5. have fun

Contract

1. participate in all activities
2. open and honest in sharing but don't let your privacy be invaded
3. listen
4. consistently try to make links here-work at MSU
5. consistently try to mak links here-personal life
6. get to know other people better
7. enjoy it-have some fun!

My Goals

1. The most important question(s) I have about sex-role stereotyping in career option is (are) . . . (topics, issues)
2. What I most want to have happen in this workshop . . .
3. What I hope does not happen . . .
4. My background in topic of career options and SRS . . .

CAREER LIFE LINE

F - F - Neighborhood events
I - F - Boss and other mentors decisions people

B.C. F ✓ E.C.
I

I - Activities as boy; Ac Sk:NS↓

I - School

In discussion, relate these F's and I's to sex role stereotyping.

BARRIERS TO CAREER DEVELOPMENT OF WOMEN

1. sex role conditioning and socialization
2. role conflicts-marriage or marriage and work
3. focus on marriage or prospect of marriage
4. lack of work orientation
5. sex discrimination

TOUCHSTONES IN WOMEN'S CAREER DEVELOPMENT

1. Life state/life span
2. Self concepts/self esteem
3. Sense of agency/self direction
4. Achievement motivation, drive, work values
5. Interpersonal style
6. Risk taking characteristics
7. Sexuality and sex-role attitudes
8. Support system
9. Economic need/money needs

TRADITIONAL MEN'S LIVES AND LIFE STAGES

0-15	Growth
15-25	Exploration
25-40	Establishment
40-55	Maintenance
55-	Decline

REDUCING RESISTANCE

1. Brainstorm ideas for eliminating barrier
2. Choose ideas which seem best
3. Decide who should expedite ideas
4. Identify needed materials and resources
5. Arrange ideas and actions into a time sequence
6. Make plans for commencing the action sequence
7. Make plans for periodic education
8. Be prepared to revise plan as needed

CAREER RELATED SEX-ROLE STEREOTYPING--INSTITUTIONAL INHIBITORS/ FACILITATORS

Problem in my setting or personal life

Short-Range Goal

Long-Range Goal

Inhibitions (Restraining Forces)	Facilitators
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

Problem Area

1. Get faculty support--recruitment of male/female in education fields where shortage
2. Sexual stereotyping in residence halls by most student staff members
3. Career Resource Center
4. Male emphasis-direction
5. Curriculum change
6. Family/spouse

Problem Area

1. To establish a process by which undecided students can guide themselves to intelligent curriculum/career choice
2. Role conflict-work/personal
3. Opportunities for females in Engineering curriculum
4. Career opportunities for Native Americans
5. Absence of Career Resource Center representing all curriculums

Problem Area

1. Define the problem as a solution
2. Getting supervisor to make decisions which are necessary in order to function on the job
3. Pay more attention to women students
4. To get acceptance of advisory as PIT $\frac{\text{CRIT}}{\text{EQIC}}$
5. Sharing child-rearing, household and having individual career

Problem Area

1. Role conflict: space and time constraints
2. Role conflict: philosophical-emotional constraints
3. Convine students future life an amalgam of anticipated roles and current decisions which may preclude that future

MAGIC SEMINAR RULES

1. Everyone has his/her own personal space
2. Everyone will have a chance to talk
3. No put-downs or evaluations allowed
4. You may ask contributor to clarify statements
5. "Own" your feelings and opinions
6. Everyone should listen attentively and use first names

MAGIC SEMINAR CUES

1. A time I felt good being a man (male)/woman (female).
2. A time I felt bad being a man (male)/woman (female).
3. A time I felt good and bad about being a woman/man.
4. A time I got in trouble for my sex-role attitudes.
5. A time I felt uncomfortable in dealing with an aggressive man/woman.
6. A time I felt uncomfortable in dealing with an assertive man/woman.
7. A time I felt uncomfortable in dealing with a passive man/woman.
8. A time I got in trouble for my sex/race role attitudes.
9. Use your own topic. For example, modify one of the above to include race, economic class, age, etc. as in: "A time I felt uncomfortable dealing with an aggressive Black (Caucasian) woman/man."

GROUP THREE

Question 1

1. How do you help yourself and others deal with sexual stereotyping problems?
2. To hear the male side of the problems.
3. To find out the extent of the problem.
4. Doesn't <u>need</u> dictate the need for career awareness of role stereotyping?
5. How can you avoid stereotyping?
6. How can you help other?

Question 2

1. Identify own personal problem with sexual stereotyping.
2. Look at subconscious problems.
3. Positive approach to discussions.
4. Open discussion-personal and intellectual levels.
5. Focus on us and MSU.
6. Keep groups small and intimate.

APPENDIX H

Summary of Total Net Enrollment by College/
Curriculum/Option for Autumn Quarter 1978 to October 18, 1978

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA

Fall 1978

SUMMARY OF TOTAL NET ENROLLMENT BY COLLEGE/CURRICULUM/OPTION FOR AUTUMN QUARTER 1978 TO OCTOBER 18, 1978

COLLEGE/CURRICULUM/OPT	DOC(9) M	DOC(9) W	MAS(8) M	MAS(8) W	EST ELG(7) M	EST ELG(7) W	NON(6) DEGREE M	NON(6) DEGREE W	2ND (5) BACH M	2ND (5) BACH W	SR (4) M	SR (4) W	JR (3) M	JR (3) W	SOPH(2) M	SOPH(2) W	FROSH(1) M	FROSH(1) W	SPEC'L ATND(0) M	SPEC'L ATND(0) W	TOTAL M	TOTAL W	SUB TOTAL	GRAND TOTAL
GENERAL STUDIES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	89	324	351	-	2	398	442	840	
Spec Non-Degre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	5	15	20	
NON-DEGREE	-	-	-	-	-	-	113	72	-	-	-	-	-	-	-	-	-	-	-	-	113	72	185	
Spec Non-Degre	-	-	-	-	-	-	2	4	-	-	-	-	-	-	-	-	-	-	-	-	2	4	6	
TCHR CERT	-	-	-	-	-	-	8	26	-	-	-	-	-	-	-	-	-	-	-	-	8	26	34	
TOTAL GEN ST	-	-	-	-	-	-	123	102	-	-	-	-	-	-	74	89	324	351	5	17	526	559	1085	1085
WAMT	-	-	-	-	-	-	10	7	-	-	-	-	-	-	-	-	-	-	-	-	10	7	17	17
COL OF AGRICULTURE																								
Agr Term	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	13	2	-	-	14	2	16	16
Gen Agr	-	-	-	-	-	-	-	-	-	2	2	-	5	-	5	2	81	25	-	-	94	29	123	123
Agriculture																								
Prod	-	-	-	-	-	-	-	-	-	-	7	1	3	1	4	3	7	8	-	-	21	13	34	
Sci	-	-	-	-	-	-	-	-	-	-	-	2	1	1	1	3	1	4	-	-	3	10	13	
Farm & Ranch	-	-	-	-	-	-	-	-	-	-	-	-	5	1	10	-	11	1	-	-	26	2	28	
Mech Agr	-	-	-	-	-	-	-	-	1	-	1	-	-	-	5	-	13	-	-	-	20	-	20	
Pl Prot	-	-	-	-	-	-	-	-	-	-	-	1	1	-	2	-	1	-	-	-	4	1	5	
Agronomy	-	-	-	-	-	-	-	-	-	-	4	-	-	-	1	2	2	-	-	-	7	2	9	
Crop Sci	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	-	3	1	4	
Hort Sci	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	2	-	-	2	4	6	
Soils Sci	-	-	-	-	-	-	-	-	1	-	1	-	-	-	3	-	2	1	-	-	7	1	8	
Ra Sci	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
Prod	-	-	-	-	-	-	-	-	2	-	6	-	1	1	4	1	5	-	-	-	18	2	20	
Sci	-	-	-	-	-	-	-	-	1	-	1	-	2	1	2	2	-	1	-	-	6	4	10	
TOTAL AGR	-	-	-	-	-	-	-	-	6	-	21	4	13	5	34	13	44	18	-	-	118	40	158	158
Ag Business	-	-	-	-	-	-	-	-	2	-	27	9	32	9	30	16	33	9	-	-	124	43	167	167
Ag Education	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	1	2	-	-	3	3	6	
Tchg	-	-	-	-	-	-	-	-	1	-	3	3	4	3	5	-	1	1	-	-	14	7	21	
Brdfld Tchg	-	-	-	-	-	-	-	-	-	-	11	3	7	1	11	1	6	2	-	-	35	7	42	
Maj	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	
TOTAL AGED	-	-	-	-	-	-	-	-	1	-	15	6	13	4	16	2	8	5	-	-	53	17	70	70
Agr Production																								
Ag Econ	-	-	-	-	-	-	-	-	1	-	8	1	2	-	2	-	-	-	-	-	13	1	14	
Agron	-	-	-	-	-	-	-	-	-	-	18	3	11	2	7	-	1	-	-	-	37	5	42	
An Sci	-	-	-	-	-	-	-	-	1	1	16	6	9	4	6	1	-	-	-	-	32	12	44	
Mch Agr	-	-	-	-	-	-	-	-	-	-	8	-	10	-	7	-	1	-	-	-	26	-	26	
Pl Prot	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	2	2	
Ra S	-	-	-	-	-	-	-	-	2	-	9	2	6	2	5	-	-	-	-	-	22	4	26	
RAM	-	-	-	-	-	-	-	-	1	-	8	6	2	4	2	3	-	1	-	-	13	14	27	
Land Res	-	-	-	-	-	-	-	-	-	-	4	3	3	2	2	-	-	2	-	-	9	7	16	
TOTAL AG P	-	-	-	-	-	-	-	-	5	1	71	22	43	15	31	4	2	3	-	-	152	45	197	197
Agr Science																								
Ag Econ	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	
An Sci	-	-	-	-	-	-	-	-	1	-	8	8	1	4	1	-	-	-	-	-	11	12	23	
Crops	-	-	-	-	-	-	-	-	-	-	1	-	3	2	-	-	-	-	-	-	4	2	6	
Pl Prot	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	2	
Ra S	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	1	3	4	
RAM	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	1	2	3	
Soils	-	-	-	-	-	-	-	-	-	-	9	4	-	1	-	1	1	-	-	-	10	6	16	
TOTAL AG S	-	-	-	-	-	-	-	-	1	-	22	12	4	11	2	2	1	-	-	-	30	25	55	55
Industrial Arts																								
Major	-	-	-	-	-	-	-	-	3	-	6	-	11	-	17	1	21	-	-	-	58	1	59	
Industries	-	-	-	-	-	-	-	-	-	-	3	-	4	-	2	-	5	1	-	-	14	1	15	
Brdfld Tchg	-	-	-	-	-	-	-	-	-	-	2	-	2	1	4	1	3	-	-	-	11	2	13	
Teaching	-	-	-	-	-	-	-	-	1	-	9	-	2	-	3	-	1	-	-	-	16	-	16	
TOTAL I A	-	-	-	-	-	-	-	-	4	-	20	-	19	1	26	2	30	1	-	-	99	4	103	103
Agr Land Resources																								
Econ.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	
Ra Sci	-	-	-	-	-	-	-	-	-	-	-	3	-	2	1	-	-	2	-	-	1	7	8	
Soils	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	-	-	-	2	2	4	
LDSP-HortDes	-	-	-	-	-	-	-	-	-	-	3	1	2	1	1	3	2	2	-	-	8	7	15	
LDSPHortMgmt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	4	-	-	2	4	6	
TOTAL AG L R	-	-	-	-	-	-	-	-	-	-	3	5	3	3	5	4	2	9	-	-	13	21	34	34
Pre-Forestry	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	3	-	-	-	5	2	7	7
Pre-Vet	-	-	-	-	-	-	-	-	1	-	5	2	8	1	7	14	28	21	-	-	49	38	87	87
TOTAL COL AGRICULTURE	-	-	-	-	-	-	-	-	20	3	186	60	140	51	160	59	245	93	-	-	751	266	1017	1017
COL OF EDUCATION																								
Elem Educ	-	-	-	-	-	-	-	-	1	7	60	13	59	5	55	9	100	-	-	-	34	275	309	
Amer Ind Ed	-	-	-	-	-	-	-	-	-	1	2	1	3	2	-	-	-	-	-	-	4	5	9	
Lib Sci	-	-	-	-	-	-	-	-	-	-	9	-	2	-	3	-	3	-	-	-	-	17	17	
Music	-	-	-	-	-	-	-	-	-	-	6	-	4	-	6	1	5	-	-	-	1	21	22	
Math	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	
TOTAL EDEL	-	-	-	-	-	-	-	-	1	8	77	14	68	8	64	10	108	-	-	-	40	318	358	358
P E																								
Elth Ed	-	-	-	-	-	-	-	-	1	8	9	2	10	6	2	8	16	-	-	-	24	38	62	
Pre-Phys Th	-	-	-	-	-	-	-	-	-	2	2	-	3	6	3	2	22	-	-	-	10	30	40	
Rec	-	-	-	-	-	-	-	-	-	3	2	3	6	4	4	8	9	-	-	-	18	21	39	
K-12	-	-	-	-	-	-	-	-	-	5	25	8	11	8	6	7	14	-	-	-	28	56	84	
Soc Sch	-	-	-	-	-	-	-	-	-	10	9	5	4	2	6	3	3	-	-	-	20	22	42	
TOTAL P E	-	-	-	-	-	-	-	-	-	1	28	47	18	34	26	31	28	64	-	-	100	167	267	267
Home Ec	-	-	-	-	-	-	-	-	-	-	1	8	-	22	-	14	-	26	-	-	1	70	71	
Business	-	-	-	-	-	-	-	-	-	-	-	11	-	15	-	14	-	19	-	-	-	59	59	
Child D/FL	-	-	-	-	-	-	-	-	-	1	2	11	1	16	1	6	-	13	-	-	4	47	51	
Inst F Mgmt	-	-	-	-	-	-	-	-	-	-	-	10	2	5	-	13	-	4	-	-	2	32	34	
2 Yr. Cert	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2	-	-	-	5	5	
Ed & Exten	-	-	-	-	-	-	-	-	-	-	1	24	-	16	-	12	-	12	-	-	1	64	65	
TOTAL H EC	-	-	-	-	-	-	-	-	-	1	3	64	3	74	1	62	-	76	-	-	8	277	285	285
Sec Educ	-	-	-	-	-	-	-	-	-	-	2	1	2	2	-	2	1	-	-	-	5	5	10	
Gen Science	-	-	-	-	-	-	-	-	-	-	7	-	3	1	2	-	-	1	-	-	12	2	14	
Phys Science	-	-	-	-	-	-	-	-	-	-	201	1	1	-	-	-	-	-	-	-	1	1	2	
Soc Studies	-	-	-	-	-	-	-	-	-	-	4	2	1	3	1	3	1	1	-	-	9	7	16	
TOTAL SECN	-	-	-	-	-	-	-	-	-	-	31	3	7	6	3	5	2	2	-	-	27	15	42	42
TOTAL COL EDUCATION	-	-	-	-	-	-	-	-	1	10	186	128	97	69	96	70	139	103	-	-	527	380	907	907

COLLEGE/CURRICULUM/OPT	DOC(9) M	DOC(9) W	MAS(8) M	MAS(8) W	EST PLG(7) M	EST PLG(7) W	NON(6) DEGREE M	NON(6) DEGREE W	2ND (5) BACH M	2ND (5) BACH W	SR (4) M	SR (4) W	JR (3) M	JR (3) W	SOPH(2) M	SOPH(2) W	FRSH(1) M	FRSH(1) W	SPEC'L ATH(0) M	SPEC'L ATH(0) W	TOTAL M	TOTAL W	SUB TOTAL	GRAND TOTAL
COL OF ENGINEERING																								
Agr Engr	-	-	-	-	-	-	-	-	3	-	10	2	14	-	10	2	21	5	-	-	58	9	67	67
Chem Engr	-	-	-	-	-	-	-	-	1	2	50	8	46	13	48	11	77	35	-	-	222	69	291	
Petroleum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	2	
TOTAL CH E	-	-	-	-	-	-	-	-	1	2	50	8	46	13	48	11	79	35	-	-	224	69	293	293
Civil Engr	-	-	-	-	-	-	-	-	14	2	73	6	35	5	74	2	105	8	-	-	301	26	327	327
Computer Sci	-	-	-	-	-	-	-	-	4	1	14	8	10	4	21	7	34	18	-	-	83	38	121	121
Con Engr Tech	-	-	-	-	-	-	-	-	1	-	40	1	28	-	49	3	45	-	-	-	163	4	167	167
Elect Engr	-	-	-	-	-	-	-	-	4	-	64	-	49	4	79	5	114	9	-	-	310	18	328	
Comp Engr	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	
TOTAL E E	-	-	-	-	-	-	-	-	4	-	65	-	49	4	79	5	114	9	-	-	311	18	329	329
EET	-	-	-	-	-	-	-	-	2	-	21	-	20	1	14	-	29	1	-	-	86	2	88	88
Engr Sci	-	-	-	-	-	-	-	-	-	-	3	-	1	-	3	1	29	-	-	-	36	1	37	37
I&ME	-	-	-	-	-	-	-	-	1	-	9	2	4	3	17	2	10	4	-	-	41	11	52	52
Mech Engr	-	-	-	-	-	-	-	-	10	-	39	2	42	1	49	2	89	2	-	-	229	7	236	236
Mech Engr Tech	-	-	-	-	-	-	-	-	-	-	22	2	18	2	18	-	25	-	-	-	83	4	87	87
TOTAL COL ENGINEERING	-	-	-	-	-	-	-	-	40	5	346	33	267	34	382	35	580	82	-	-	1615	189	1804	1804
COL OF LTRS & SCIENCE																								
Botany	-	-	-	-	-	-	-	-	2	-	3	-	1	3	1	1	10	6	-	-	17	10	27	
Biology Tchg	-	-	-	-	-	-	-	-	-	-	2	5	4	2	4	4	1	-	-	-	11	11	22	
TOTAL BOT	-	-	-	-	-	-	-	-	2	-	5	5	5	5	5	5	11	6	-	-	28	21	49	49
Chemistry	-	-	-	-	-	-	-	-	1	-	5	3	6	1	3	2	6	4	-	-	21	10	31	
Professional	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-	3	-	3	
Interdiscpln	-	-	-	-	-	-	-	-	-	-	2	-	-	2	1	1	-	5	-	-	3	8	11	
Lab	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	1	-	-	3	1	4	
Teaching	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	
TOTAL CHEM	-	-	-	-	-	-	-	-	2	-	8	3	6	3	5	3	10	10	-	-	31	19	50	50
Earth Science	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	2	-	-	3	2	5	
Geography	-	-	-	-	-	-	-	-	1	2	-	-	-	-	1	-	3	-	-	-	6	1	7	
Geog Planng	-	-	-	-	-	-	-	-	1	-	2	1	1	1	2	2	-	-	-	-	6	4	10	
Geology	-	-	-	-	-	-	-	-	3	2	20	4	12	6	13	1	13	9	-	-	63	22	85	
Geophysics	-	-	-	-	-	-	-	-	1	-	2	-	6	-	1	2	-	1	-	-	10	3	13	
Meteorology	-	-	-	-	-	-	-	-	1	-	1	2	3	-	2	1	3	1	-	-	10	4	14	
TOTAL ESCI	-	-	-	-	-	-	-	-	6	3	28	7	22	7	19	6	23	13	-	-	98	36	134	134
Econ																								
General	-	-	-	-	-	-	-	-	-	-	7	2	5	-	2	2	4	2	-	-	18	6	24	
Econ Science	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	2	-	2	
Natural Res	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-	-	2	1	3	
TOTAL ECON	-	-	-	-	-	-	-	-	-	-	7	2	9	-	2	3	4	2	-	-	22	7	29	29
English	-	-	-	-	-	-	-	-	1	-	6	3	2	2	1	3	8	-	-	-	8	18	26	
Literature	-	-	-	-	-	-	-	-	1	3	4	-	4	4	3	3	12	-	-	-	10	24	34	
Lit & Com Tch	-	-	-	-	-	-	-	-	-	6	9	5	9	-	5	-	5	-	-	-	11	28	39	
TOTAL ENGL	-	-	-	-	-	-	-	-	2	9	19	8	15	6	9	6	25	-	-	-	29	70	99	99
Entomology	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1
F&WL	-	-	-	-	-	-	-	-	5	1	23	7	17	3	23	9	33	15	-	-	101	35	136	136
Political Sci	-	-	-	-	-	-	-	-	-	-	1	1	4	-	5	4	10	4	-	-	20	9	29	
Political Sci	-	-	-	-	-	-	-	-	-	-	4	4	1	1	-	-	-	-	-	-	5	5	10	
Pralaw	-	-	-	-	-	-	-	-	1	14	3	9	6	8	2	14	7	-	-	-	45	19	64	
Public Admin	-	-	-	-	-	-	-	-	-	5	3	2	-	1	-	1	2	-	-	-	9	5	14	
Policy Sci	-	-	-	-	-	-	-	-	-	3	2	1	1	-	2	-	-	-	-	-	4	5	9	
TOTAL POLS	-	-	-	-	-	-	-	-	1	27	13	17	8	14	8	25	13	-	-	-	83	43	126	126
History	-	-	-	-	-	-	-	-	-	-	8	3	5	3	2	3	1	7	-	-	16	16	32	
Teaching	-	-	-	-	-	-	-	-	1	-	9	1	3	3	2	1	1	3	-	-	16	8	24	
TOTAL HIST	-	-	-	-	-	-	-	-	1	-	17	4	8	6	4	4	2	10	-	-	32	24	56	56
Math	-	-	-	-	-	-	-	-	-	-	10	2	3	1	2	1	8	6	-	-	23	10	33	
Statistics	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	1	-	-	2	4	6	
Techr Prep	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	1	2	
Teaching	-	-	-	-	-	-	-	-	-	-	5	5	5	3	4	3	3	3	-	-	17	14	31	
TOTAL MATH	-	-	-	-	-	-	-	-	-	-	15	8	9	5	7	5	12	11	-	-	43	29	72	72
Microbiology	-	-	-	-	-	-	-	-	1	-	9	10	7	3	3	6	3	17	-	-	23	36	59	
Env Health	-	-	-	-	-	-	-	-	-	1	6	3	4	5	2	1	4	2	-	-	16	12	28	
Med Tech	-	-	-	-	-	-	-	-	-	2	12	13	3	19	1	18	2	23	-	-	18	75	93	
TOTAL MB	-	-	-	-	-	-	-	-	1	3	27	26	14	27	6	25	9	42	-	-	57	123	180	180
Modern Lang	-	-	-	-	-	-	-	-	1	1	2	3	-	3	-	5	-	7	-	-	3	19	22	
Teaching	-	-	-	-	-	-	-	-	-	-	1	3	-	-	1	2	1	3	-	-	3	8	11	
TOTAL M L	-	-	-	-	-	-	-	-	1	1	3	6	-	3	1	7	1	10	-	-	6	27	33	33
Philosophy	-	-	-	-	-	-	-	-	-	-	1	-	1	2	-	-	1	-	-	-	3	2	5	
Religion	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
TOTAL PHIL	-	-	-	-	-	-	-	-	1	1	-	1	2	-	-	1	-	-	-	-	3	3	6	6
Physics	-	-	-	-	-	-	-	-	-	-	6	-	4	-	4	-	8	-	-	-	22	-	22	
Professional	-	-	-	-	-	-	-	-	-	-	4	1	4	2	5	-	5	-	-	-	18	3	21	
Interdiscpln	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	2	1	3	
TOTAL PHYS	-	-	-	-	-	-	-	-	-	-	11	1	9	2	9	1	13	-	-	-	42	4	46	46
Pre-Medicine	-	-	-	-	-	-	-	-	-	-	13	1	22	3	25	9	31	26	-	-	91	39	130	130
Psychology	-	-	-	-	-	-	-	-	1	1	16	12	9	3	7	5	11	17	-	-	44	38	82	
General	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	
TOTAL PSYCH	-	-	-	-	-	-	-	-	1	1	16	12	9	3	7	5	11	18	-	-	44	39	83	83
Sociology																								
Soc	-	-	-	-	-	-	-	-	-	-	8	9	3	4	4	2	4	10	-	-	19	25	44	
Rural Soc	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	2	2	
Social Work	-	-	-	-	-	-	-	-	1	-	7	19	3	23	1	16	2	26	-	-	14	84	98	
Soc Justice	-	-	-	-	-	-	-	-	1	-	11	15	11	18	6	9	16	15	-	-	45	57	102	
Anthropology	-	-	-	-	-	-	-	-	4	-	2	1	1	3	1	2	2	1	-	-	10	7	17	
Res	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
TOTAL SOC	-	-	-	-	-	-	-	-	6	1	28	44	18	49	12	30	24	52	-	-	88	176	264	264
Speech Communication																								
General	-	-	-	-	-	-	-	-	-	-	1	6	2	4	1	3	2	9	-	-	6	22	28	
Educ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	
Preprof	-	-	-	-	-	-	-	-	-	-	2	6	1	2	-	4	-	4	-	-	3	16	19	
Pub Rel	-	-	-	-	-	-	-	-	-	-	3	4	-	6	3	7	2	11	-	-	8	28	36	
TOTAL SPCH	-	-	-	-	-	-	-	-	-	-	6	16	1	12	-	14	4	25	-	-	17	67	84	84
Zoology	-	-	-	-	-	-	-	-	-	-	15	9	12	4	5	4	1	4	-	-	35	20	55	
Pre-Pharm	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	7	-	-	1	9	10	
TOTAL ZOO	-	-	-	-	-	-	-	-	-	-	15	9	12	5	5	5	1	11	-	-	36	29	65	65
TOTAL C L & S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

COLLEGE/CURRICULUM/OPT	DOC(9) M	DOC(9) W	MAS(8) M	MAS(8) W	ELG(7) M	ELG(7) W	DEGREE M	DEGREE W	BACH M	BACH W	SR (4) M	SR (4) W	JR (3) M	JR (3) W	SOPH(2) M	SOPH(2) W	FROSH(1) M	FROSH(1) W	ATND(0) M	ATND(0) W	TOTAL M	TOTAL W	SUB TOTAL	GRAND TOTAL
COL OF ARTS & ARCH																								
Architecture	-	-	-	-	-	-	-	-	1	-	3	7	5	9	11	34	24	41	-	-	44	91	135	
Art	-	-	-	-	-	-	-	-	-	1	13	11	14	9	3	4	3	7	-	-	33	32	65	
Prof Design	-	-	-	-	-	-	-	-	-	-	9	12	3	7	-	-	3	7	-	-	15	26	41	
Fine Arts	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	2	-	1	-	-	2	5	7	
History	-	-	-	-	-	-	-	-	-	-	3	3	-	3	1	1	-	5	-	-	4	12	16	
Education	-	-	-	-	-	-	-	-	-	-	2	4	2	4	-	-	-	-	-	-	4	8	12	
Educ, K-12																								
TOTAL ART	-	-	-	-	-	-	-	-	1	2	31	37	25	33	15	41	30	61	-	-	102	174	276	276
F&TV	-	-	-	-	-	-	-	-	1	-	4	-	6	1	8	3	21	17	-	-	40	21	61	
Motion Pict	-	-	-	-	-	-	-	-	-	-	19	3	5	-	7	1	7	2	-	-	38	6	44	
Television	-	-	-	-	-	-	-	-	-	-	10	5	9	3	5	2	7	3	-	-	31	13	44	
Photography	-	-	-	-	-	-	-	-	1	-	17	9	12	10	5	5	5	8	-	-	40	32	72	
TOTAL F&TV	-	-	-	-	-	-	-	-	2	-	50	17	32	14	25	11	40	30	-	-	149	72	221	221
Music Educ	-	-	-	-	-	-	-	-	-	-	5	-	5	3	3	8	18	23	-	-	31	34	65	
Sound Tech	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	1	
School	-	-	-	-	-	-	-	-	-	1	11	10	7	6	3	3	3	6	-	-	26	26	52	
Studio Tchg	-	-	-	-	-	-	-	-	-	1	-	2	-	2	1	1	-	1	-	-	1	7	8	
TOTAL MUS	-	-	-	-	-	-	-	-	-	2	16	12	12	11	9	12	21	31	-	-	58	68	126	126
Theatre Arts	-	-	-	-	-	-	-	-	1	-	3	1	2	2	2	9	3	3	-	-	11	15	26	
Administratn	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2	2	
Teaching	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	1	-	-	1	3	4	
TOTAL THTR	-	-	-	-	-	-	-	-	1	-	4	3	2	2	2	10	3	5	-	-	12	20	32	32
TOTAL COL ARTS & ARCH	-	-	-	-	-	-	-	-	18	6	181	74	113	64	91	86	187	150	-	-	590	380	970	970
SCHOOL OF BUSINESS																								
Business	-	-	-	-	-	-	-	-	1	2	3	1	7	5	12	21	38	43	-	-	61	72	133	
Accounting	-	-	-	-	-	-	-	-	5	2	33	25	34	33	32	48	64	88	-	-	168	196	364	
Bus Ed, Basic	-	-	-	-	-	-	-	-	-	-	2	2	7	4	1	3	5	4	-	-	15	13	28	
Bus Ed, Of Ed	-	-	-	-	-	-	-	-	-	-	-	13	-	6	-	6	-	6	-	-	-	31	31	
Distrib Ed	-	-	-	-	-	-	-	-	-	-	1	3	2	-	3	1	-	4	-	-	6	8	14	
Finance	-	-	-	-	-	-	-	-	1	-	30	13	31	16	23	8	27	10	-	-	112	47	159	
Management	-	-	-	-	-	-	-	-	-	1	37	14	36	23	51	14	69	30	-	-	193	82	275	
Marketing	-	-	-	-	-	-	-	-	-	-	15	12	8	20	15	23	25	17	-	-	63	72	135	
Office Admin	-	-	-	-	-	-	-	-	-	-	-	11	1	4	-	6	1	21	-	-	2	42	44	
2 Yr Sec Prog	-	-	-	-	-	-	-	-	-	-	-	1	-	6	-	17	-	36	-	-	-	60	60	
TOTAL SCHL BUSINESS	-	-	-	-	-	-	-	-	7	5	121	95	126	117	137	147	229	259	-	-	620	623	1243	1243
SCHOOL OF NURSING																								
Nursing	-	-	-	-	-	-	-	-	9	30	24	190	13	145	8	113	10	120	-	-	64	598	662	662
COL OF GRAD STUDIES																								
Applied Econ	-	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	12	12
Ag Educ	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2
Ag Engr	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2
Agronomy	-	-	15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1	16	16
Animal Sci	-	-	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	2	11	11
Applied Art	-	-	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	4	11	11
Bio Chem	1	-	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	8	8
Botany	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4	4
Business Ed	-	-	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	7	7
Chem Engr	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	8	8
Chemistry	14	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	5	24	24
Civil Engr	2	-	22	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	4	28	28
Crop & Soil S	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	7	7
Earth Sci	-	-	16	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	2	18	18
Educ																								
Adult & High	16	6	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	11	32	
Curr & Instr	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	8	
Elem Admin	2	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	5	8	
El Cur & Inst	-	1	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	5	
Gen Sch Admin	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	5	
Guid & Counsl	-	-	7	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	11	18	
Sec Admin	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4	
Sec Tchg	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	6	
TOTAL EDUC	27	11	20	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	39	86	86
Elect Engr	2	-	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	-	15	15
Entomology	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	5	5
F&WL	-	-	20	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	3	23	23
Genetics	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2
History	-	-	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	5	11	11
Home Ec	-	-	1	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	9	9
I&ME	-	-	6	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	4	10	10
IA Ed	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	2
Math	9	2	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	9	26	26
Mech Engr	2	-	7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	1	10	10
Microbiology	3	-	10	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	7	20	20
Nursing	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	17
P E	-	-	4	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	16	20	20
Phys	14	3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	3	27	27
Plant Path	4	1	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	1	13	13
Psychology	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	8	8
Pub Admin	-	-	13	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	11	24	24
Range Sci	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	8	8
Soils	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	7	7
Vet Sci	1	1	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	2	8	8
Zoology	2	-	7	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	4	13	13
TOTAL GRAD STUDIES	87	21	268	146	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	355	167	522	522
UNCLASSIFIED	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	2	3	5	5
TOTAL UNIV ENROLLMENT	87	21	268	146	-	-	133	109	119	46	1171	826	892	724	1046	827	1839	1594	5	17	5560	4360	9920	9920
TOTAL BY CLASS	108		414		0		242		165		1997		1616		1873		3433		22		9920			

Joseph E. Frazier
Director of Admissions

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APPENDIX I

Letters, Forms, and Other Relevant Material
Regarding Career Life Planning Workshops

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

September -----

Dear Graduate Student,

As part of Montana State University's STEPS TO SUCCESS Program we will be conducting Career-Life Planning Workshops each quarter. These workshops are intended to help MSU General Studies students become more aware of their career options and means to achieve them. Each group of four students will be led by a trained facilitator.

Would you consider becoming one of these facilitators? Your involvement in this program would require meeting with your group for six three-hour sessions after receiving approximately 20 hours of formal training. Efforts are being made for you to receive academic credit for your participation in this opportunity to not only help others but also increase your own skills and self-awareness. It also is realistic to expect this experience might increase your employability in today's tight job market.

Training sessions will be held TUESDAY afternoons, October 3 through November 7 from 3:00 to 6:00 p.m. The program sessions will be WEDNESDAY evenings, October 11 through November 15 from 6:30 to 9:30 p.m. A half hour staff critique will follow each session.

If you are interested in becoming a group facilitator, please phone me at 994-2826, or mail the lower portion of this sheet to the Office of Student Affairs and Services, Room 212, Montana Hall, not later than 5:00 p.m., September 27, 1978.

Thank you very much.

Sincerely,

DR. PEGGY LEITERMAN-STOCK
Project Director, STEPS To Success

* * * *

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

September 13, 1978

Dear Member of the Montana State University Faculty,

We would welcome and appreciate your aid in implementing Montana State University's STEPS TO SUCCESS Program. The STEPS Program, the only university career education effort to receive federal funding this year, seeks to strengthen the process of career awareness, exploration and choice by MSU General Studies students.

One most important component of STEPS will be Career-Life Planning Workshops to be held each quarter. In these workshops faculty members, serving as facilitators, will meet with small groups of 4 students each to discuss and explore understandings of self-awareness, career options and strategies for attaining individual career goals.

Could you help us by being one of these faculty group facilitators? From those faculty expressing interest we are able to offer 18 persons $350 stipends in partial compensation for the time (42 hours) these involvements will require.

Formal preparation sessions for the Fall Workshops are scheduled on campus TUESDAY Afternoons from 3:00 to 6:00 p.m., October 3 through November 7 in a location to be announced.

The Fall Workshops are to be held on WEDNESDAY evenings October 11 through November 15. Each workshop will be from 6:30 to 9 30 p.m. and will be followed by a half hour critique for facilitators.

If you are interested in becoming a group facilitator, or would like to learn more about the STEPS Program, please phone me at 994-2826, or mail the lower portion of this sheet to the Office of Student Affairs and Services, Room 212, Montana Hall, not later than 5:00 p.m., September 27, 1978.

Thank you very much.

Sincerely,

Dr. Peggy Leiterman-Stock

DR. PEGGY LEITERMAN-STOCK
Project Director, STEPS TO SUCCESS

* *

Yes, I am interested in becoming a facilitator for the Career-Life Planning Workshops. My preference is for the (please check one) Fall_____, Winter_____, Spring_____ quarter. I can be reached at:

Name_____

Address_____

Phone_____

Please return to: Office of Student Affairs and Services
Room 212, Montana Hall

TELEPHONE (406) 994 2826

CERTIFICATE OF ACHIEVEMENT

MONTANA STATE UNIVERSITY

This is to certify that

has satisfactorily completed

a series of six

Career-Life Planning Workshops.

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President

Dean of Student Affairs and Services

Program Director

Date

Group Facilitator

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APPENDIX J

Letters, Forms, and Other Relevant Material
Regarding the Career Resource Personnel Office

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

March 19, 1979

Dear Alumni,

The Office of Student Affairs and Services would like to thank you for your support of the newly created "MSU Career Personnel Resource Office".

As you may remember, last Spring, in conjunction with the Alumni Office, the Office of Student Affairs and Services sent out a questionnaire in the Alumni mailings requesting information from Alumni who would be interested in acting as "career advisors and consultants" for students who are currently trying to make career decisions. The response was overwhelming!! As a result, your responses generated an Alumni Personnel Resource List of over 1,000 volunteers in over 100 career occupations!

At this time, we have set up an office for the students, publicized the service, and have been monitoring a flow of students since early in February. Hopefully our office or Montana State University students will be contacting you in the near future.

We would sincerely appreciate any address changes which may occur as we would like to keep our list as current as possible.

Once again, thank you for your support! We sincerely hope this will be a viable and rewarding experience for both you and the students.

Sincerely,

Dr Peggy Leiterman-Stock

DR. PEGGY LEITERMAN-STOCK
Assistant Dean of Students

PLS/da
3/7/79

TELEPHONE (406) 994 2826

MSU

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

May 11, 1979

Dear Chamber of Commerce Member:

We are delighted that you recently volunteered your time and experience to Montana State University's Career Resource Personnel Office.

We cannot adequately express our enthusiasm for the marvelous response from local Chamber of Commerce Members. We look forward to the opportunity of working together with you and our students.

Now that we have your name on our resource list, we may also be contacting you for interviews with students that visit the office for individual help.

If, after talking with one of our students, you have comments or suggestions for our office, please let us know. Thanks again for your willingness to assist our students.

We can be reached at:

Career Resource Personnel Office
Room 209, Montana Hall
Montana State University
Bozeman, MT 59717

Sincerely,

Dr. Peggy Leiterman-Stock

Dr. Peggy Leiterman-Stock
Assistant Dean of Students
Director, Steps To Success

PLS/dja

TELEPHONE (406)994 2826

msu

STUDENT AFFAIRS & SERVICES

MONTANA STATE UNIVERSITY, BOZEMAN 59717

Dear

Thank you for your recent cooperation with Montana State University's Career Personnel Resource Office.

We are gratified and pleased that you found time in your busy schedule to speak with one of our students. The feedback we receive from our students indicates the information provided by "Career Resources" such as yourself, have answered many questions previously unanswerable on campus.

Again, we thank you for your time and consideration and welcome any constructive comments and criticisms that you may have for our office.

Sincerely,

DR. PEGGY LEITERMAN-STOCK
Assistant Dean of Students

PLS/da
3/6/79

TELEPHONE (406) 994 2826

Need To Find Out...

Come ? Visit our Career Resource Personnel Office

What It's Really Like Out There??

Opportunities To:
Write or Talk to,
Visit With,
or Job-Shadow
Over
1000 Alumni
In Over 100
Career Options

Why not find out before you commit yourself?

ASK CAREER QUESTIONS!

Room 209, Montana Hall
994-2826
9 to 12am Mon.-Fri.

Sponsored by Student Affairs ? Services ? The Alumni Assoc

HOW TO GO ABOUT CHOOSING A CAREER

1. Take an inventory of your school record, including:

   a. Grades.
   b. Extracurricular activities.
   c. Ability to get along with other students.
   d. Leadership qualities.
   e. Persistence on class projects.
   f. Ability to accept authority.
   g. Interests in homework and learning new things.
   h. Your ambition.

2. Evaluate your needs and understand your values:

   a. Do you like to be with people?
   b. Do you like to work with a team, with others of your age, or alone?
   c. Do you like working with children?
   d. Do you like to work with ideas, or things?
   e. Do you like to work under pressure of deadlines?
   f. Do you like to plan each step ahead?

   For women in particular:

   a. Do you prefer a particular situation or location?
   b. Are there special types of people with whom you would prefer to work?
   c. Is money your main goal?
   d. Do you think you will stay at home if you have preschool children?
   e. If you have children, will their child-rearing responsibilities be shared?
   f. Will financial responsibilities be shared?
   g. Would you enjoy a job that pays a lower salary but carries a lot of prestige?
   h. Would you like a job where you can be left to work on your own?

3. Seek out men and women to whom you can talk who are involved in a career that appeals to you. Make an appointment to meet with them and carefully plan your questions in order to find out what it's like to have chosen that kind of work:

   a. Find out what they like best about their job.
   b. Ask what they like least about their work.
   c. Find out what they really do every day.
   d. Find out what is involved with their work.

Remember, there is no such thing as one special career for everyone.

* This information was taken from: I Can Be Anything, Careers and Colleges for Young Women by Joyce Slayton Mitchell.

/pd
3/1/79

FORMAT FOR "CAREER RESOURCE PERSONNEL OFFICE" TELEPHONE SURVEY

Introduction:

Hello, (resource person) , this is (name-person calling) of the Career Resource Personnel Office at MSU.

We are calling to conduct a survey of (Alumni) and(Non-Alumni) (which ever they are--indicated on their cards) that have participated in our "Career Resource Personnel List".

You were contacted by our office in the past few weeks to assist our students in questions concerning career decisions and occupational information. We'd like to take a few moments of your time now, to ask you some questions.

1. Which category did you assist the student? (check one) READ OVER THE PHONE.

_____ Correspondence with a student(s).

_____ Talk with a student(s) on the phone.

_____ Talk with a student(s) at your place of work.

_____ Have a student spend a day/time with you ("job shadowing").

_____ Other (specify)_____

_____

2. Do you feel this service was a good experience for the student(s)?

Yes _____ No _____

3. Do you feel the student was prepared for the interview?

Yes _____ No _____

4. Was the student contact a good experience for you?

Yes _____ No _____

5. Will you continue to be a resource person in the future?

Yes _____ No _____

6. Would you recommend this type of a service for students in the future?

Yes _____ No _____

7. To which of the following age groups do you belong?

21-30 _____ 56-65 _____

31-45 _____ 65 or over _____

46-55 _____

8. Male _____ Female _____

9. Do you have any suggestions or comments for the future operation of this service?

Yes _____ No _____

If yes, what (briefly) _____

_____

_____

Thank you Mr., Ms. Name. We appreciate your assistance and time you have volunteered.

APPENDIX K

Students Involved in STEPS

STEPS DATA

Fall Quarter 1978

Total Number of Participants - 117; 72 women, 45 men

Career Life Planning - 23; 18 women, 5 men

Math Component:

Math 001 - 39; 20 women, 19 men

Math 100 - 26; 14 women, 12 men

Calculus - 6; 6 women

Winter Quarter 1979

Total Number of Participants - 114; 75 women, 39 men

Career Life Planning - 30; 22 women, 8 men

Math Component

Math 001 - 31

Math 100 - 24

Attrition Rate

Of 115: 2 withdrew during the year; 1 withdrew at the beginning of the 2nd quarter.

4 were suspended

6 did not return for Winter Quarter

2 dropped STEPS

NARRATIVE: STUDENTS IN STEPS TO SUCCESS

1. He is an average student who has accomplished just well enough to survive at MSU. He did not start mathematics until Spring 1979, did not seek help and never completed Career Life Planning. After investigating business and nursing he decided to major in social work. His grades-2.50 Spring 1979 GPA, 2.12 cumulative GPA were very close to what had been predicted for him.

2. Accomplishment his first quarter was low as predicted but he improved his grades winter quarter. Had difficulty reconciling part-time work and academic life and was slow to seek help. After some deliberation decided to major in history and transfer to Mankato State University near home and with baseball. His spring grades were much improved, 3.00 term GPA resulting in a 2.31 cumulative GPA for his first year.

3. Entering MSU with a low predicted grade point average and minimal self-esteem he did much better than expected. Planned to leave MSU for a vocational-technical program. Really helped by mathematics component of STEPS. Now majoring in Industrial Arts. He has changed from a negative,low achiever to a self-motivated person. His grades reflect this; 2.87 spring 1979 and 2.89 cumulative GPA.

4. A transfer student with average grades, he had only 10th grade basic mathematics. With success in mathematics he changed his goal from business to forestry and will transfer to Northern Arizona University. His studying efforts tended to come in spurts. Spring 1979 he had a 2.66 term and a 2.39 cumulative GPA at MSU.

5. Very independent and with substantial part-time employment he nevertheless obtained good grades. Spring 1979 GPA 3.33, cumulative GPA 3.12. Wants an academic challenge and will seek this in a physics major.

6. With a poor start Fall 1978 due to discomfort with her initial accounting course she will continue to explore possible majors next year but probably will choose business. Her Spring 1979 grades (2.53 GPA) raised her cumulative GPA to 2.34.

7. Very poor start (0.80 grade point average) during Fall quarter with difficulties in architecture courses due to poor mathematics preparation. Still interested in engineering technologies if he can obtain necessary academic skills. Did not complete Career Life Planning. His academic achievement continued to improve Spring quarter with a 2.20 term and 2.60 cumulative grade point average at the end of his first year at MSU.

8. A strong student who experienced difficulty in one accounting course. Repeating this Spring quarter she is keeping her interest in business (accounting or finance) with a possible law school goal. A 2.60 Spring 1979 GPA caused her cumulative GPA to drop to 3.10.

9. A 1974 high school graduate, he had never planned to attend college. He did complete one year auto mechanics course at Helena Vo-Tech. After succesfully completing basic mathematics and science course he plans to start mechanical engineering next fall. His grades remain high; Spring 1979 GPA 3.69, 3.64 cumulative GPA for his first year.

10. A high ability student, she was hindered by "mono" during her first two quarters here. Science oriented, she is investigating psychology and physical therapy. Her grades are good; 2.82 Spring 1979 and 3.23 cumulative GPA.

11. A very strong student with substantial involvement in music, she could not schedule Career Life Planning. She plans to start a civil engineering major this fall. Her grades are excellent; 3.57 Spring 1979 and 3.80 cumulative GPA.

12. With a strong initial interest in pre-veterinary medicine she found this program not realistic for her. Part-time employment and poor study habits also detracted from her grades. She is now showing interest in academic areas other than the sciences and will investigate anthropology this fall. Her Spring quarter grades (2.23 term GPA) raised her cumulative grade point average to 2.05 for the year.

13. With full-time employment as a nurses aide she has little time for study and did not complete Career Life Planning. A 1976 high school graduate she attended a vocational-technical program in Great Falls. Interested in health related careers but not nursing at MSU. She had a very poor background in mathematics and improved upon this, passing elementary algebra in two quarters. Her Spring 1979 GPA was 3.28 giving her a cumulative GPA of 2.96.

14. A very casual student with a good mind and lots of "outside interests", he does the minimum required to obtain reasonably good grades. To be a Film and TV (Photography option) major. His grades are 2.30 for Spring 1979 with a 2.67 cumulative GPA.

15. Loving the college scene but not academic work she completed 16 credits her first two quarters here with a 2.37 GPA. After processing a complete withdrawl from the university this spring she will seek employment here, probably in the MSU cafeteria.

16. Interests in both engineering and pre-veterinary medicine have been maintained by her since initial MSU enrollment though she has explored social work and industrial design. She is earning high enough grades to give her ample choice, 4.00 Spring 1979 GPA with a 3.73 cumulative GPA.

17. Seeking a career in publishing she is "sorting out" interests in business, history and English with history the most likely choice. A capable, consistent student, she has little difficulty making "C" or better grades. Her Spring 1979 GPA was 2.73 giving her a cumulative GPA of 2.78.

18. A solid student, she has reduced her career choices to physics or engineering after investigating art and industrial technology. She missed Career Life Planning due to "outside work" and a death in her family. Her study habits were erratic though some of this may be attributable to the above circumstances. Her Spring 1979 GPA was 1.76 lowering her cumlative GPA to 2.55.

19. A strong student, she explored but rejected engineering to consider business and/or social work majors. Her grades are very good with a Spring 1979 GPA of 3.47 and 3.37 cumualtive GPA.

20. Quite capable, she did very little academic work her first two MSU quarters missing a substantial number of class sessions. Social life was evidently very important to her. However, her Spring quarter grades showed substantial improvement with a 2.25 grade point average in 4 difficult courses (16 credits) raising her cumulative to a 1.86 GPA.

21. An excellent student, she seeks to combine home economics extension with another field, perhaps agricultural business with a possible law school goal. Her Spring 1979 GPA was 3.75 with a 3.68 cumulative.

22. With no high school algebra and little other academic ability, he devoted hardly any energy to overcoming this handicap. He was enrolled in the Mathematics 001 program for three quarters. Strong social interests also were a negative influence. Did not complete Career Life Planning. His Spring 1979 GPA was 1.22 (1.88 cumulative GPA), which reinforces his plans to leave MSU and work in the construction industry.

23. Working to continue agricultural education with a military career, he had massive work involvements on local farms. Did not complete Career Life Planning. His Spring 1979 grades (1.15 GPA) reflected his "outside" work and caused his cumulative GPA to drop to 1.77.

24. A very capable person, he prepared for and entered a mechanical engineering major. Helped a great deal by Career Life Planning. His grades are very good; 3.20 for Spring 1979 and 3.50 cumulative GPA for the first year.

25. Interested in science with very poor preparation, especially in mathematics, she accomplished a great deal this year. A most positive example of what can be accomplished when student and program are right for each other. Will continue to explore science oriented majors with much more confidence. She was the only student in STEPS to start mathematics at the arithmetic level and complete Mathematics 100 (Intermediate Algebra). Her enhanced self-concept mirrors her other achievements. Her Spring 1979 grades, 2.06 term and 2.62 cumulative GPA were lower than the previous quarters, probably due to time diverted to her efforts in mathematics.

26. Doing adequate academic work from a limited academic background. His interests have focused on an art major combined with military science. He was late in seeking help with his mathematics studies, nevertheless obtained adequate grades, 2.50 term and 2.19 cumulative GPA for Spring 1979.

27. Very weak student whose poor preparation/mathematics reflects in her grades. She will leave MSU after this academic year to seek full-time employment, a good choice. She gave her studies essentially no effort and made a commensurate amount of academic progress. At the end of Spring quarter she had a 0.75 term and 1.26 cumulative GPA.

28. With very poor high school mathematics preparation he built substantial mathematics strength and adjusted an initial interest in photography to enter Industrial and Management Engineering. His 2.00 Spring term GPA lowered his cumulative GPA to 2.73.

29. With a primary goal of becoming a pop singer her studies are obviously secondary with her. Nevertheless she has been able to obtain adequate grades in relatively light academic loads. May consider theatre arts major. Her Spring 1979 term GPA was 2.70 giving her a 2.71 cumulative GPA.

30. A poor prospect for post secondary education he has overcome his own defensive attitudes to achieve reasonable personal and academic success at MSU. He is investigating recreation and speech communication majors. His cumulative GPA was lowered to 2.40 by a 1.83 Spring 1979 term GPA.

31. A very conscientious person she explored several career interests including civil engineering and teaching. Her interests shifted to life sciences, specifically the environmental health emphasis in microbiology. Her grades are good, a 3.12 for both Spring 1979 and cumulative GPA's.

32. A solid student, her career explorations included forestry, horticulture, and engineering before she shifted from sciences to a social work major (which she loves). Her 3.25 Spring 1979 GPA raised her cumulative GPA to 2.88.

33. She has done much better at MSU than would have been predicted for her. However, she has yet to give her studies the serious effort they require. She seeks a career in interior design but has not yet settled on a major field. Her Spring 1979 grades (1.42 term GPA) dropped her cumulative GPA to 2.17.

34. A 1976 high school graduate with limited academic promise, his added maturity helps him to obtain adequate grades in his college courses. After considering nursing he has settled on a health education major. His grades are good; 2.73 Spring 1979 GPA resulting in a 2.60 cumulative GPA.

35. Returning to MSU after previous enrollment he needed to successfully repeat several courses. His interest in biological science evidently is not matched by ability or willingness to study. Did not finish the mathematics so essential to his enrollment at MSU. He is especially weak in arithmetic and defensive about this. At the end of the Spring quarter his MSU cumulative grade point average was 1.58.

36. A weak student, her MSU experience has been a series of frustrations starting with her initial nursing enrollment Fall 1977. She did make a sincere (though inconsistent) effort to reorganize her life style with the intention of transfer to a less demanding academic setting. She lacks positive role models in her family, is capable but does not often work enough to reach that capability. However, Spring 1979 was a genuine success for her with a 2.62 GPA raising her MSU cumulative GPA to 1.60.

37. A very capable student, she explored a wide range of major interests including pre-medicine, planning and special education. Her current interest is landscape horticulture. Her grades are very good, a Spring 1979 term GPA of 3.53 resulted in a 3.44 cumulative GPA for her first year.

38. His poor academic record coincides with his low academic promise and unwillingness to study. Not motivated for study except in a few areas (athletic training). Suspended and reinstated after Winter 1979. Suspended again after Spring 1979 with a 1.75 term and a 1.34 cumulative GPA.

39. An initially well disciplined student, she did quite well at first in a rather difficult program. After considering engineering fields she now plans an accounting major. Her grades dropped substantially Spring quarter, her 1.00 term GPA resulting in a 2.07 cumulative GPA.

40. Troubled by health problems she nevertheless obtained a satisfactory academic record and experienced a great deal of personal development during this academic year. She plans to be an exchange student next fall returning to major in elementary education. She is a responsible student but at times gives up. Nevertheless her grades are good with a 3.00 Spring 1979 GPA and 3.17 cumulative GPA.

41. Joining STEPS to obtain some career insights she found them in a quarter of Career Life Planning and advising. She plans to enter public health nursing. Her Spring 1979 grades reflected her increased maturation, a 3.73 term GPA raising her cumulative GPA to 2.97.

42. After a bad start at MSU due to homesickness she improved her grades and endured the rest of the academic year. A sharp individual, her career interests would be well met by construction engineering technology but she prefers to return home to a community college surveying program. Her grades showed a great deal of improvement, a 3.29 Spring 1979 GPA raising her cumulative GPA to 2.88.

43. After a disappointing quarter as an architecture major he explored art, film and TV, pre-chiropractic and business fields with the latter his probable choice of a major. He now seems to feel much better about himself and this has been reflected not only in his grades but also his sense of comfort at MSU. His Spring 1979 term and cumulative GPAs were 3.00.

44. With a strong academic record she has chosen an elementary education major. Disliked mathematics portion of program but stayed with it and is bound to benefit. She is a very capable student for whom a social life is also important. He Spring 1979 term GPA was 3.30 with a cumulative GPA of 3.28.

45. A very poor mathematics background had led to poor accomplishments in science, her principal academic interest. After a lot of hard work in mathematics she made substantial progress only to be forced into taking Spring 1979 incompletes because of an operation to remove her appendix. Her cumulative grade point average after Winter quarter was 2.77. After considering art and industrial arts she aspires to a major in dental hygiene which will mean her eventual transfer from MSU.

46. With slightly better academic accomplishment than would have been predicted he plans to start construction engineering technology this fall. Interests in physical education, civil engineering and pre-veterinary medicine had been ruled out earlier. He did not take Career Life Planning. His approach to his studies (doing just enough to "get by") is reflected in his Spring 1979 GPA of 1.92 and 2.20 cumulative GPA.

47. He has overcome very poor high school mathematics preparation to achieve overall academic success. His initial interest in biology has changed to landscape architecture. His MSU grades have continued to improve with a 3.75 Spring 1979 GPA raising his cumulative GPA to 3.23.

48. A very capable student she followed her interest in accounting with good academic achievement. However, she recently developed an interest in physical therapy which she will investigate next fall. Her grades are good with a 2.73 Spring 1979 GPA and a 2.83 cumulative GPA.

49. By keeping her academic load light she has been able to attain a much better grade point average than would have been predicted for her. She has been serious about her studies, but not consistently so. Her health, physical education interests have jelled into a recreation major. Her spring 1979 term GPA of 3.14 raised her cumulative GPA to 2.75.

50. A very capable person with a host of problems. He has enjoyed some success in art, his probable major after ruling out accounting. After a poor start at MSU he raised his cumulative grade point average to 2.11 with a 2.26 spring 1979 GPA.

51. His ambitions (pre-medicine, engineering) are not matched by his scholastic productivity and this difference has not been reconciled. After spring 1979, his term GPA was 2.06, cumulative GPA 2.26.

52. Bright and capable, nevertheless she has been quick to say "I can't." Her grades have been excellent. She would be helped by appropriate female role models. She has narrowed her career interests to business, computer science, and possibly engineering. Her grades are excellent: spring 1979 GPA 3.88; 3.78 cumulative GPA.

53. A 1975 high school graduate with poor predictions of academic success and somewhat inconsistent study habits, he has used his added maturity to earn good grades, became prepared in mathematics and select a challenging major field--botany. He plans to couple this with National Guard officer's training. His spring 1979 GPA was 2.33, cumulative GPA 2.65.

54. In spite of low academic predictions and an intense priority for skiing, he has been able to maintain a good grade point average. His career interests include flying and he may enter Air Force ROTC. His spring 1979 GPA was 2.50, lowering his cumulative to 2.93.

55. A strong student with excellent academic record, she has selected electrical engineering as her major. She considered a number of other professional fields including law, dentistry/dental hygiene and fashion merchandising. Her spring 1979 GPA was 3.73 raising her cumulative GPA to 3.56.

56. Starting with film and television, her major interests shifted to interior design, then art combined with business. Her grades are good (spring 1979 GPA 2.84, cumulative 2.85) but she is not satisfied with MSU and may transfer. She did not complete Career Life Planning.

57. She graduated from high school in 1976, then worked for two years as a bookkeeper. A very capable student (unlike predictions for her) following an accounting interest she soon tired of the university setting and plans to return to the employment world. A serious facial injury added to her discontentment with her present circumstances. Her spring 1979 GPA of 0.57 reflected her abandonment of classes and lowered her cumulative GPA to 2.40.

58. Well adjusted to MSU she has a definite goal (marketing). She studies just hard enough to remain enrolled as is demonstrated by her spring 1979 term GPA of 2.13 lowering her cumulative GPA to 2.52.

59. Mathematics difficulties led her into STEPS. The help she has received has rekindled enough confidence to reawaken her veterinary medicine dream. Dance is another of her serious interests. Her spring 1979 academic achievement was a substantial victory raising her cumulative grade point average to 2.11 with a 2.80 GPA.

60. Very capable yet seemingly very anxious, she has obtained a strong academic record. She plans to start electrical engineering this fall. Her Spring 1979 term GPA of 3.50 raised her cumulative GPA to 3.41.

61. Of Native American Indian heritage, she is a capable student with solid academic achievement at MSU. After considering optometry and pre-medicine she has decided on a pre-Physical therapy program. She enjoys a serious involvement with music. This precluded her participation in Career Life Planning. Her Spring 1979 GPA of 3.00 raised her cumulative GPA to 2.84.

62. Serious about her studies she has done well at MSU first considering social work then choosing nursing as her career goal. Her grades are very good with a Spring 1979 term GPA of 3.73 raising her cumulative GPA to 3.31.

63. Starting with the accounting sequence she ran into some academic difficulty the second quarter. Nevertheless, she has built some mathematics strength and has maintained a satisfactory overall record. She is working part-time for a family owned trucking firm and this has seemed to improve her enthusiasm about her studies. Her Spring term GPA of 2.25 raised her cumulative GPA to 2.02.

64. With limited academic background and a poor first quarter she worked harder and improved her academic achievement. Initially planning to leave MSU in June, she now expects to stay at least another year. She is exploring possible major fields. Her cumulative GPA was raised to 2.48 by a Spring 1979 term GPA of 2.68.

65. A very able and serious student it was very easy for her to get "up tight" about academic and personal problems. After ruling out nursing she considered pre-medicine and extension, then decided on a combination of agricultural engineering plus computer science. Her grades are very good with a Spring 1979 GPA of 3.12 and a 3.26 cumulative GPA.

66. A 1974 high school graduate with low predictions of academic success he did well until he tired of scholastic efforts during the Spring quarter. He intends to return to his crane operator vocation. He did not complete Career Life Planning. His Spring GPA of 2.00 lowered his cumulative GPA to 2.42.

67. With very low predictions of academic success she did better than predicted for her but not well enough to remain in the university. She knew this and consequently tended to place her studies lower in priority. She intends to start beautician school in July. Her Spring 1979 grades indicated she had "given up" at MSU with a 1.33 term and a 1.48 cumulative grade point average.

68. He had done reasonably well at MSU in spite of a poor high school record. He is interested in an accounting major. In a light academic load his Spring 1979 GPA of 3.00 raised his cumulative GPA to 2.44.

69. Doing much better than predicted and building some mathematics strength she plans a career in the travel industry with a MSU business major and some time in the National Student Exchange program. Her grades are very good with a Spring 1979 GPA of 3.05 and a cumulative GPA of 3.43.

70. With poor high school mathematics/science preparation she built some mathematics strength and, after considering veterinary medicine, decided to major in civil engineering. Her Spring 1979 term GPA of 2.33 lowered her cumulative GPA to 2.80.

71. Very unhappy at MSU at first, she improved her achievement and self-concept dramatically. She became very enthusiastic about learning mathematics. Her goal is now elementary education and her grades continue to improve; A Spring 1979 term GPA of 3.16 raising her cumulative GPA to 2.92.

72. A capable, productive student. Her strong interest in elementary education changed to nutrition during the Spring quarter. Her cumulative GPA was raised to 3.08 by a 3.25 Spring 1979 GPA.

73. Quite capable of college work but low in self-concept and willingness to manage her time she nevertheless achieved a good academic record her first two terms. Her study habits, however, continued to be poor and were reflected in a Spring 1979 GPA which lowered her cumulative GPA to 2.25. Her major interest is clearly English (Journalism).

74. Acieving much better than predicted she initially thought computer science would be her best choice of a major field. This choice changed with coursework experience, now she leans towards a business major. Her Spring 1979 term GPA of 3.22 raised her cumulative GPA to 2.97.

75. Initially planning to leave MSU because of athletic disappointment (basketball) he has maintained a strong academic record and decided to stay with a business major. His Spring 1979 GPA was 2.76 with a 2.97 cumulative GPA.

76. With very little preparation for and ability in mathematics she tended to have difficulty in courses that require quantitative thought and had a poor first quarter. Her grades improved substantially the second quarter in part to her developing a strong interest in deaf education. Her Spring 1979 term GPA of 3.42 raised her cumulative GPA to 2.58.

77. A capable student but very shy, her grades have been reasonably good. She has decided on a child development major with a goal of working with young children, but not teaching. Her Spring 1979 term GPA was 3.06 with a 2.87 cumulative GPA.

78. An easy-going student, he has built some mathematics strength and plans to attempt electrical engineering next fall. His Spring 1979 term GPA raised his cumlative GPA to 2.42.

79. She has achieved at a much higher level than predicted for her and developed a strong career interest in social work. Her Spring 1979 term GPA was 3.30 with a 3.10 cumulative GPA.

80. Shifting to General Studies from Psychology she developed a strong interest in preparing to teach English. Quantitative areas have been a problem for her but she worked hard to develop these skills. She also had difficulty obtaining time to study due to part-time employment. Nevertheless, her academic achievement has been solid with a 3.58 Spring 1979 GPA and a 3.20 cumulative GPA.

81. Severe financial problems have meant he had to work full-time in addition to his Spring 1979 coursework. Consequently he did not complete Career Life Planning. He plans to start an art major next year. He has maintained good grades; Spring 1979 GPA of 2.62 and a 2.50 cumulative GPA.

82. With much better academic accomplishment for her first two quarters than predicted she changed an initial interest in social work to architecture. She did not complete Career Life Planning. Her Spring 1979 grades were poor, a 0.42 term GPA lowering her cumulative GPA to 2.03.

83. Transferring to MSU after a poor year at another college he showed a dramatic change in his academic achievement. With excellent MSU grades the first two quarters he plans to major in computer science. His grades dropped substantially Spring 1979 to a 1.66 term GPA lowering his cumulative GPA to 2.97.

84. With limited potential and motivation for academic success she also was troubled by serious personal and health problems. She did not complete Career Life Planning and was given an incomplete in the Mathematics 001 course. Her Spring 1979 grades reflected her problems, a 0.88 term GPA lowering her cumulative GPA to 1.86.

85. Well adjusted to her studies and MSU she has maintained solid academic achievement. She has not decided on an academic major but plans to include a pre-law program in her studies. Her Spring 1979 GPA of 3.23 raised her cumulative GPA to 2.97.